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CHECKLIST OF VASCULAR PLANTS OF ORGAN PIPE CACTUS NATIONAL MONUMENT, CABEZA PRIETA NATIONAL WILDLIFE REFUGE, AND TINAJAS ALTAS, ARIZONA

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ABSTRACT

The contiguous Organ Pipe Cactus National Monument, Cabeza Prieta National Wildlife Refuge, and the Tinajas Altas region within the Sonoran Desert in southwestern Arizona have a vascular plant flora of 736 taxa (species, subspecies, varieties, and hybrids) in 420 genera and 94 families. Elevation and ecological diversity decrease from east (Organ Pipe) to west (Tinajas Altas) while aridity increases from east to west, all correlating with decreasing botanical diversity. Organ Pipe Cactus National Monument, which includes an ecologically isolated Sky Island of dwarfed woodland rising above actual desert, has a flora of 657 taxa in 395 genera and 93 families, of which 11 percent (72 species) are not native. Cabeza Prieta National Wildlife Refuge has a documented flora of 426 taxa in 266 genera and 63 families, of which 8.8 percent (37 species) are not native. The Tinajas Altas region has a flora of 227 taxa in 164 genera and 47 families, of which 5.3 pecent (12 species) are not native. Non-native species make up 10.7 percent (78 species) of the total flora of the three areas, but among these only 7 percent (52 species) are established in the flora area as reproducing populations. Six non-natives have become invasive species that pose serious threats to the native ecosystems: Sahara Mustard (*Brassica tournefortii*), Red Brome (*Bromus madritensis* subsp. *rubens*), Buffelgrass (*Cenchrus ciliaris*), Arabian and Mediterranean Grass (*Schismus arabicus* and *S. barbatus*), and Tamarisk (*Tamarix chinensis*).

Key words: Sonoran Desert, flora, Arizona, Organ Pipe Cactus National Monument, Cabeza Prieta National Wildlife Refuge, Tinajas Altas, non-native species, invasive species

INTRODUCTION

In this publication we provide a checklist of the vascular plants for the contiguous protected areas of Organ Pipe Cactus National Monument, Cabeza Prieta National Wildlife Refuge, and the Tinajas Altas region (the flora area) of southwestern Arizona (Fig. 1). Detailed background information on these regions,

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including specific geographic information in a regional gazetteer and their biota, can be found in Broyles et al. (2007), Felger and Broyles (1997, 2007), and Felger et al. (2007a).

A specimen-based listing for the flora area and surrounding regions is provided by Felger et al. (1997, 2007b). However, in view of significant new findings, taxonomic revisions, and corrections we offer a current and concise checklist for the flora area—Organ Pipe to the Tinajas Altas region. This checklist is specimen-based with 736 taxa (species, subspecies, varieties, and hybrids) in 420 genera and 94 families (Table 1). Elevation and ecological diversity decreases from east (Organ Pipe) to west (Tinajas Altas) while aridity increases from east to west, all correlating with decreasing botanical diversity. This listing is preliminary to our larger work on the flora and vegetation of the flora area in preparation. Although there has been extensive documentation of plants from this region, diligent botanists should be able to discover some additional species.

The present flora area is part of five major, contiguous protected areas and a sixth de facto area that make up the heart of the Sonoran Desert, here called the "Six Dry Borders Areas": 1) Organ Pipe Cactus National Monument, 2) Cabeza Prieta National Wildlife Refuge, and 3) Sonoran Desert National Monument in Arizona; 4) Reserva de la Biosfera El Pinacate y Gran Desierto de Altar in Sonora and 5) Reserva de la Biosfera Alto Golfo de California y Delta del Río Colorado in Sonora and Baja California; and the 6) Barry M. Goldwater Range. The Goldwater Range in Arizona is not a protected area per se but generally is managed as one by the U.S Air Force and U.S. Marine Corps. Spanning 210 miles (338 km) from San Felipe, Baja California, to just southwest of Phoenix, Arizona, these six areas cover 7,515,221 acres (3,041,302 ha), or 11.7 percent of the Sonoran Desert, making them the largest zone of contiguous protected desert anywhere in the Americas. This bio-network supports a flora of at least 865 vascular plant taxa (species, subspecies, and varieties) including 91 non-native species in 448 genera and 107 families (Felger et al. 2007a and b, and new records including *Cuscuta* spp., *Mentzelia longiloba* var. *pinacatensis* J. J. Schenk & L. Hufford, *Psorothamnus fremontii*, and *Salvinia molesta* D. S. Mitchell in Salviniaceae). This flora includes more than one-third of the total flora of the entire Sonoran Desert, a region covering about 100,000 mi^2 (310,000 km^2) in five states in Mexico and the United States (Shreve and Wiggins 1964).

Table 1 compares the flora of the three protected areas of Arizona, and the combined Six Dry Borders Areas. The three areas of the present floristic listing have a collective size of 1,270,699 acres (514,234 ha). The Six Dry Borders Areas, about six times larger than the included three areas of the present floristic listing, have a total flora of 860 species, an increase of only about 15 percent above that of the present flora listing.

ORGAN PIPE CACTUS NATIONAL MONUMENT

The Monument covers 330,689 acres (133,825 ha) and ranges from 980 to 4808 ft (299 to 1465 m) elevation. The majority of the Monument falls within Shreve's (1951) Arizona Uplands subdivision of the Sonoran Desert. The higher

elevations of the Ajo Mountains, along the eastern margin of the Monument, support an ecologically isolated Sky Island rising above actual desert vegetation. At these higher elevations one finds a dwarfed woodland that includes Juniper (*Juniperus arizonica*), Scrub Oak (*Quercus turbinella*), and Rosewood (*Vauquelinia californica*). The southwestern corner of the Monument transitions into the Lower Colorado Valley subdivision of the Sonoran Desert (Felger 2000; Felger et al. 1992). Works on the vegetation of the Monument include those by Brown and Warren (1986), Lowe et al. (1992), Mulroy (1971), Steenbergh and Warren 1977, Warren and Anderson (1987), and Warren et al. (1981). The National Park Service is in the process of updating existing maps through its Inventory and Monitoring program.

The first checklist of the Monument plants was completed by McDougall (ca. 1940). That list and one prepared by Phillips (1967) were based on field experience and specimens. Subsequent checklists compiled by Adams (1971) and Jordan (1975) contained undocumented and questionable listings. Janice Bowers' (1980) flora was the first critical, specimen-based flora of the Monument and serves as the basis for all future botanical work in the Monument. The non-native flora was discussed by Felger (1990) and a detailed flora of Quitobaquito with ethnobotanical information was prepared by Felger et al. (1992). Additions to the flora were published by Pinkava et al. (1992) and Felger et al. (1997, 2007b) provided a comprehensive annotated flora.

The total present flora of the Monument includes 657 taxa (species, subspecies, varieties, and hybrids) in 395 genera and 93 families. Non-native species account for 11 percent of the flora (72 species), although many are not established as reproducing populations.

CABEZA PRIETA NATIONAL WILDLIFE REFUGE

The Refuge covers 860,010 acres (348,034 ha) and ranges from 680 to 3293 ft (207 to 1004 m) in elevation. The entire Refuge is within Shreve's (1951) Lower Colorado Valley subdivision of the Sonoran Desert. A preliminary, specimen-based flora of the Refuge by Simmons (1965, 1966) was based on first-hand observations and specimens. Phelps (1981) produced a checklist of the Refuge, Tunnicliff et al. (1986) compiled a list for the Barry M. Goldwater Military Range that included the Refuge, and Felger et al. (1997, 2007b) provided substantial additions for Goldwater Range. While the flora is well documented, many remote areas, especially the rugged mountains are expected to contain unrecorded range extensions, such as the discovery of Scallop-leaf Sage (*Salvia vaseyi*) new for Arizona by Cain et al. (2010).

Detailed vegetation studies were conducted by Malusa (2003). We list a documented flora of 426 taxa in 266 genera and 63 families. Non-native plants (37 species) make up 8.8 percent of the flora, although some are not established as reproducing populations.

TINAJAS ALTAS REGION

This is the most arid portion of the flora area and adjoins the western margin of the Cabeza Prieta National Wildlife Refuge. The core area is the 80,000 acres (32,375 hectares) of the Tinajas Altas region encompassing the Tinajas Altas

Mountains from near the Cipriano Pass to the Mexican border at Frontera Canyon and the south end of the Lechuguilla Valley drained northward by Coyote Wash and southward by La Jolla Wash. Elevation ranges from ca. 950 to 2764 ft (ca. 290 to 842 m). The region is within Shreve's (1951) Lower Colorado Valley subdivision of the Sonoran Desert.

Felger and Van Devender (2012) provided an abridged checklist of the flora in a work on the Tinajas Altas region by Broyles et al. (2012), and that information is included here with some revisions and new discoveries. Felger et al. (forthcoming) provide a comprehensive treatment of the modern and deep history flora of the Tinajas Altas region. Annotated checklists for the Goldwater Range included Tinajas Altas plants (Felger et al. 1997, 2007b). We document a flora of 227 taxa (including 2 hybrids) in 164 genera and 47 families. There are 12 non-native species in the flora, which is only 5.3 percent of the total flora. We include some plants from immediately adjacent localities that are expected to occur in the core area.

The boundaries for this area are those of the Tinajas Altas addition to Cabeza Prieta National Wildlife Refuge as proposed by U.S. Fish and Wildlife Service (1970a & b) and as incorporated within the Cabeza Prieta Refuge for a few months in 1975 by the Department of the Interior (Tunnicliff et al. 1986: 3.14). Those boundaries would have extended the northern refuge boundary westward to a point about one mile west of Cipriano Pass and then southward to the U.S.–Mexico border. That area encompassed land in townships 12, 13, and 14S in range 17W and townships 12 and 13S in range 18W, totaling approximately 80,000 acres (U.S. Fish & Wildlife Service 1970b) and included Raven Butte, the Tinajas Altas Mountains, and portions of the Lechuguilla Desert and Davis Plain, but the land was not congressionally included within the refuge. In turn, because of its special biological, historical, archaeological, geological, and scenic values, the Bureau of Land Management in coordination with the Department of Defense subsequently designated much of the former addition as an Area of Critical Environmental Concern (ACEC) of irregular configuration comprising about 60,500 acres (U.S. Departments of the Air Force, Navy, and Interior 2006), and later as a Special Natural Interest Area of comparable though not congruent boundaries (Range Management Department 2007).

NON-NATIVE SPECIES

Approximately 10.7 percent of the total flora, or 78 species, are not native to the region (see Felger 1990, 2000; Felger et al. 2007b; Van Devender et al. 2009; Wilson et al. 2002). Among the total non-native flora, only 7 percent (52 species) are established as reproducing populations and a number of these occur only in disturbed habitats. Twenty-seven species do not have reproducing populations in the flora area: these include "strays" such as Shepherd's Purse (*Capsella bursa-pastoris*), Safflower (*Carthamus tinctorius*), and Wheat (*Triticum aestivum*), as well as others that have persisted from cultivation, such as the Figs (*Ficus carica*) and Pomegranates (*Punica granatum*) at Quitobaquito (e.g., Felger et al. 1992), and/or plants extirpated from the flora area such as Watercress (*Nasturtium officinale*). Among the fully established non-natives, a few have become invasive species that

pose serious threats to the native ecosystems, e.g., Sahara mustard (*Brassica tournefortii*), Red Brome (*Bromus madritensis* subsp. *rubens*), Buffelgrass (*Cenchrus ciliaris*), Arabian Grass (*Schismus arabicus*), Mediterranean Grass (*Schismus barbatus*), and Tamarisk (*Tamarix chinensis*) (Felger 1990, 2000; Felger et al. 2007b; Van Devender et al. 2009).

THE CHECKLIST

Plants in this checklist are grouped as Pteridophytes (ferns and lycopods or "ferns and fern relatives"), Gymnosperms (cone-bearing plants), and Angiosperms: Magnoliidae (magnoliids), Eudicotyledoneae (eudicots), and Monocotyledoneae (monocots). Within these categories the plants are listed alphabetically by family, genus, species, infraspecific taxa (subspecies or varieties), and hybrids. The accepted scientific names are in bold.

Nomenclature in the checklist utilizes our best interpretation of current systematic knowledge. We generally follow or interpret the taxonomy of the Flora of North America, Vascular Plants of Arizona (Vascular Plants of Arizona Editorial Committee, 1992+), and the Jepson Flora Project (2012), and utilize Tropicos (2011) as reference for authors of scientific names and indications of "accepted name" when provided (e.g., Poaceae). References supporting taxonomic interpretations generally not included in those more general works or of special interest are cited in the checklist with the particular taxa.

Selected synonyms of scientific names are italicized within brackets [--]. Vernacular, or common, names follow the scientific names or synonyms and when known, or deemed worthwhile, are given in English, Spanish, and the Hia C-ed O'odham dialect, respectively. English language common names largely follow those provided by the Jepson Flora Project and USDA Plants Database (2011). The Spanish-language names are italicized. The O'odham names are from Felger et al. (2007b). These indigenous names are based largely on Gary Nabhan's work in Felger et al. (1992, 2007b). Plant family designations follow the APG III system (Angiosperm Phylogeny Group; Stevens 2011).

A voucher specimen is cited for each of the three areas in which the taxon is present, with the exception of some reliable sight records or published references when a specimen was not available. Specimens cited are at the University of Arizona Herbarium (ARIZ), unless otherwise indicated by the standardized abbreviations for herbaria (Index Herbariorum 2009), or at the herbaria of Organ Pipe Cactus National Monument (identified as ORPI) or Cabeza Prieta National Wildlife Refuge (identified as CAB). All herbarium specimens cited have been seen by Felger, although some have been seen as images. The name of the collector and collection number is given. In cases where more than one collector is listed on a label, generally only the first collector's name is given. If no collection number is provided on the herbarium label, then the specimen is identified by the date of collection, for example, *Harbison 6 Mar 1937.* Additional specimens are cited in Felger et al. (2007b) as well as the Southwest Environmental Information Network (SEINet 2011), and are found in the regional herbaria including ARIZ, ASU, DES, SD, and the herbaria at Organ Pipe Cactus National Monument (ORPI) and Cabeza

Prieta National Wildlife Refuge (CAB). Richard Felger's collections are identified as RSF, Susan Rutman's as SR, and Tom Van Devender's as TRV.

Area designations are: CP = Cabeza Prieta National Wildlife Refuge, OP = Organ Pipe Cactus National Wildlife Refuge, TA = Tinajas Altas region. Non-native plants established as reproducing populations in the flora area are indicated with an asterisk (*) and non-native species not established as reproducing populations are marked with two asterisks (**).

PTERIDOPHYTES – FERNS AND LYCOPHYTES

MARSILEACEAE – WATER-CLOVER FAMILY

Marsilea vestita Hooker & Greville subsp. **vestita**. Hairy Water-clover, Hooked Pepperwort
CP: *RSF 01-571.*

PTERIDACEAE – MAIDENHAIR FERN FAMILY

Argyrochosma limitanea (Maxon) Windham subsp. **limitanea** [*Notholaena limitanea* Maxon var. *limitanea*]. Southwestern False Cloak-fern
OP: *Nichol 23 Feb 1939.*

Astrolepis cochisensis (Goodding) D. M. Benham & Windham subsp. **cochisensis** [*Notholaena cochisensis* Goodding. *N. sinuata* var. *cochisensis* (Goodding) Weatherby. *Cheilanthes cochisensis* (Goodding) Mickel]. Scaly Cloak-fern, Jimmy-fern
CP: *RSF 93-29.* **OP**: *Goodding 455-41.* **TA**: *TRV 10 Mar 1980.*

Astrolepis sinuata (Lagasca ex Swartz) D. M. Benham & Windham subsp. **sinuata** [*Notholaena sinuata* (Lagasca ex Swartz) Kaulfus. *Cheilanthes sinuata* (Lagasca ex Swartz) Domin.]. Wavy Star-scaled Cloak-fern
OP: *RSF 90-568.*

Bommeria hispida (Mettenius ex Kuhn) Underwood. Hairy Bommeria
OP: 17 Dec 1939, *Harbison 26317* (SD).

Cheilanthes lindheimeri Hooker. Fairy Swords
OP: *RSF 90-559.*

Cheilanthes parryi (D. C. Eaton) Domin [*Notholaena parryi* D. C. Eaton]. Parry's Lip-fern
CP: *Simmons 21 Nov 1964.* **OP**: *Wirt 5 Dec 1990.* **TA**: *Harrison 6575.*

Cheilanthes villosa Davenport ex Maxon. Hairy Lip-fern
OP: *RSF 05-267.*

Cheilanthes wrightii Hooker. Wright's Lip-fern
OP: *Bowers 1003.*

Cheilanthes yavapensis T. Reeves ex Windham. Yavapai Lip-fern
OP: *Darrow 3863.*

Notholaena californica D.C. Eaton subsp. **californica** [*Cheilanthes deserti* Mickel]. California Cloak-fern
CP: *Wiggins 26 Mar 1932.* **OP**: *RSF 88-135* (ORPI). **TA**: *Reeves 5353* (ASU).

Notholaena standleyi Maxon [*Cheilanthes standleyi* (Maxon) Mickel]. Star Cloak-fern
CP: *RSF 92-575.* **OP**: *Yatskievych 81-92.*

Pellaea truncata Goodding. Spiny Cliff-brake
OP: *Bowers 1701.*

Pentagramma triangularis (Kaulfuss) Yatskievych, Windham & E. Wollenweber subsp. **maxonii** (Weatherby) Yatskievych, Windham & E. Wollenweber [*Pityrogramma triangularis* (Kaulfuss) Maxon var. *maxonii* Weatherby]. Goldback Fern
OP: *Bowers 930.*

SELAGINELLACEAE – SPIKE-MOSS FAMILY

Selaginella arizonica Maxon. Arizona Spike-moss; *flor de piedra*
CP: *RSF 92-578.* **OP**: *Bezy 25 Oct 1964.*

Selaginella eremophila Maxon. Desert Spike-moss
CP: *RSF 92-585.* **OP**: *RSF 88-113.* **TA**: *Reichenbacher 28 Mar 1981.*

GYMNOSPERMS – CONE-BEARING PLANTS

CUPRESSACEAE – CYPRESS FAMILY

Juniperus arizonica (R. P. Adams) R. P. Adams [*J. coahuilensis* (Martínez) Gaussen ex R. P. Adams var. *arizonica* R. P. Adams. *J. erythrocarpa* Cory, in part: New Mexico, Arizona]. Arizona Juniper. See Adams et al. (2006).
OP: *RSF 90-508.*

EPHEDRACEAE – JOINT-FIR FAMILY

Ephedra aspera Engelmann ex S. Watson [*E. nevadensis* S. Watson var. *aspera* (Engelmann ex S. Watson) L.D. Benson]. Boundary Ephedra; *canutillo*; ku'ukpalk
CP: *Yeatts 3653.* **OP**: *Bowers 1266.* **TA**: *Hodgson 2100* (DES).

ANGIOSPERMS – FLOWERING PLANTS

MAGNOLIIDS – MAGNOLIIDEA (majority of basal dicots)

ARISTOLOCHIACEAE – BIRTHWORT FAMILY

Aristolochia watsonii Wooton & Standley [*A. brevipes* Bentham var. *acuminata* S. Watson, not *A. acuminata* Lamaire, *A. porphyrophylla* H. Pfeifer]. Indian-root; *hierba del indio, zapatito*
CP: *RSF 92-700.* **OP**: *RSF 86-275.*

SAURURACEAE – LIZARD-TAIL FAMILY

Anemopsis californica (Nuttall) Hooker & Arnott. Yerba mansa; *hierba del manso*; va:vis
OP: *Mearns 2786* (US).

EUDICOTS – EUDICOTYLEDONEAE (more advanced dicots)

ACANTHACEAE – ACANTHUS FAMILY

Anisacanthus thurberi (Torrey) A. Gray. Desert Honeysuckle
OP: *Bowers 1240.*
Carlowrightia arizonica A. Gray. Arizona Wrightwort; *lemilla*
CP: *Lehto L23542* (ASU). **OP**: *RSF 88-266.*
Dicliptera resupinata (Vahl) de Jussieu. Fold-wing; *alfalfilla*
OP: *Lockwood 163.*
Justicia californica (Bentham) D. N. Gibson [*Beloperone californica* Bentham]. Desert Hummingbird-bush; *chuparrosa*; wipisimal
CP: *Benson 10787.* **OP**: *Peebles 10825.* **TA**: *Shreve 5940.*
Justicia candicans (Nees) L. D. Benson [*Jacobinia ovata* A. Gray]. *Chuparrosa*
OP: *Nichol 23 Feb 1939.*
Justicia longii Hilsenbeck [*Siphonoglossa longiflora* (Torrey) A. Gray]. Longflower Tube-tongue
OP: *Daniel 2590* (ASU).
Ruellia nudiflora (Engelmann & A. Gray) Urban [*R. nudiflora* var. *runyonii* (Tharp & F. A. Barkley) B. L. Turner]. Violet Ruellia
OP: *Lockwood 163.*

ADOXACEAE – ADOXA FAMILY

****Sambucus cerulea** Rafinesque [*S. nigra* Linnaeus subsp. *cerulea* (Rafinesque) Bolli. *S. mexicana* C. Presl ex de Candolle. *S. cerulea* var. *mexicana* (C. Presl ex de Candolle) L. D. Benson. *S. neomexicana* Wooton. *S. cerulea* var. *neomexicana* (Wooton) Rehder]. Blue Elderberry; *tápiro.* See Eriksson and Donoghue (1997).
OP: *Tinkham Apr 1942.*

AIZOACEAE – AIZOON FAMILY

***Mesembryanthemum crystallinum** Linnaeus. Crystal Iceplant; *hielitos*
OP: *SR 11 May 1995.*

***Mesembryanthemum nodiflorum** Linnaeus. Slender-leaf Iceplant; *hielitos*
CP: *SR 11 May 1995.* **OP**: *SR 11 May 1995.*

Trianthema portulacastrum Linnaeus. Horse-purslane; *verdolaga de cochi*; kasvañ
CP: Adobe Well (Simmons 1966). **OP**: *RSF 88-430.*

AMARANTHACEAE– AMARANTH FAMILY (includes Chenopodiaceae)

***Amaranthus albus** Linnaeus [*A. graecizans* of authors, not *A. graecizans* Linnaeus]. Tumbleweed Amaranth
OP: *Harbison 13 Dec 1939* (SD).

Amaranthus crassipes Schlechtendahl var. **crassipes**. Spreading Amaranth
CP: *RSF 92-713.* **OP**: *Bowers 1531* (ORPI). **TA**: *RSF 04-24.*

Amaranthus fimbriatus (Torrey) Bentham ex S. Watson. Fringed Amaranth; *bledo, quelitillo*; cuhukkia i:vakĭ
CP: *RSF 92-663.* **OP**: *Bowers 1520.* **TA**: *RSF 04-25.*

Amaranthus palmeri S. Watson. Careless Weed, Pigweed; *quelite de las aguas*; cuhugia
CP: *RSF 92-665.* **OP**: *Bowers 1521.*

Amaranthus ×tucsonensis Henrickson. Tucson Amaranth
OP: *Harbison 26249.*

Atriplex canescens (Pursh) Nuttall. Four-wing Saltbush; *chamizo cenizo*; 'onk 'i:vakĭ
CP: *RSF 93-61.* **OP**: *SR 20031031-1* (ORPI).

Atriplex elegans (Moquin-Tandon) D. Dietrich [*A. elegans* subsp. *fasciculata* (S. Watson) H. M. Hall & Clements]. Wheelscale Orach; *chamizo cenizo*; 'onk 'i:vakĭ
CP: *RSF 92-581.* **OP**: *Bowers 912.*

Atriplex lentiformis (Torrey) S. Watson subsp. **lentiformis**. Quail Bush, Lens Scale, Big Saltbush; *chamizo grande*
OP: *Nichol 28 Apr 1939.*

Atriplex linearis S. Watson [*A. canescens* (Pursh) Nuttall subsp. *linearis* (S. Watson) H. M. Hall & Clements]. Narrowleaf Saltbush. See Felger (2000) and Felger et al. (2007b).
CP: Las Playas, 31 Jan 1992, *RSF*, observation. **OP**: *RSF 90-488.*

Atriplex pacifica A. Nelson. Pacific Orach, South Coast Saltscale
CP: *Eiber 7.* **OP**: *Bowers 1225.*

Atriplex polycarpa (Torrey) S. Watson. Desert Saltbush, Allscale Saltbush; *chamizo cenizo*; 'onk 'i:vakĭ
CP: *TRV 9 Mar 1980.* **OP**: *RSF 87-268.* **TA**: *RSF 02-04.*

****Bassia hyssopifolia** (Pallas) Kuntze. Smother Weed
OP: *SR 15 Apr 2005* (ORPI).

***Chenopodium murale** Linnaeus. Netleaf Goosefoot; *chual, choal*; 'onk 'i:vakĭ, kaupdam
CP: *RSF 93-366.* **OP**: *Bowers 1015.* **TA**: *RSF 98-149.*

Chenopodium watsonii A. Nelson. Watson's Goosefoot
OP: *Bowers 1019* (ORPI).

Gomphrena sonorae Torrey. Sonoran Globe Amaranth
OP: *Wirt 13 Nov 1989* (ORPI).

Monolepis nuttalliana (Schultes) Greene. Poverty Weed; 'opoñ
CP: *RSF 93-77.* **OP**: *Bowers 1160.*

Nitrophila occidentalis (Moquin-Tandon) S. Watson. Alkali Weed
OP: *Bowers 1333.*

***Salsola tragus** Linnaeus [*S. australis* R. Brown. *S. iberica* (Sennen & Pau) Botschantzev ex Czerepanov. *S. kali* of authors, not *S. kali* Linnaeus. *S. kali* var. *temifolia* Tausch. *S. pestifer* Nelson]. Russian Thistle, Tumbleweed; *chamizo volador*; hejel 'e'esadam, vo:po'odam sa'i
CP: *RSF 92-644.* **OP**: *Bowers 1720.*

Suaeda nigra (Rafinesque) J. F. Macbride [*S. moquinii* (Torrey) Greene. *S. torreyana* S. Watson]. Bush Seepweed; *quelite salado*; s-cuk onk
CP: *RSF 01-544.* **OP**: *TRV 30 Aug 1978.*

Tidestromia lanuginosa (Nuttall) Standley subsp. **eliassoniana** Sánchez-del Pino & Flores Olvera [*T. eliassoniana* (Sánchez-del Pino & Flores Olvera) Sánchez-del Pino]. Woolly Honeysweet; *hierba ceniza, hierba lanuda*
CP: *RSF 92-666*. **OP**: *RSF 88-408*. **TA**: *RSF 04-64*.

ANACARDIACEAE – CASHEW FAMILY
Rhus aromatica Aiton var. **trilobata** (Nuttall) A. Gray [*R. trilobata* Nuttall]. Skunk Bush; *limita*
OP: *Harbison 25670*.
Rhus kearneyi F. A. Barkley subsp. **kearneyi** [*Schmaltzia kearneyi* (F. A. Barkley) F. A. Barkley]. Desert Sumac; *limita del desierto*
CP: *Simmons 27 Sep 1964*. **TA**: *Harrison & Kearney 6573* (isotype).

APIACEAE (UMBELLIFERAE) – CARROT OR PARSLEY FAMILY
Bowlesia incana Ruiz & Pavón. Hoary Bowlesia
CP: *Elias 10202*. **OP**: *Bowers 1132*.
Daucus pusillus Michaux. Wild Carrot; *zanahoria silvestre*
CP: *RSF 93-343*. **OP**: *Nichol 26 Mar 1939*.
Eryngium nasturtiifolium de Jussieu ex F. Delaroche. *Hierba del sapo*
CP. *Lehto L22460*.
Lomatium nevadense (S. Watson) J. M. Coulter & Rose. Biscuit-root
OP: *SR 2003-333* (ORPI).
Spermolepis echinata (Nuttall ex de Candolle) A. Heller. Bristly Scale-seed
CP: *RSF 93-360*. **OP**: *McDougall 69*.
Yabea microcarpa (Hooker & Arnott) Koso-Poljanski [*Caucalis microcarpa* Hooker & Arnott]. False Carrot
OP. *Wirt 1 Apr 1990*.

ARISTOLOCHIACEAE, see **MAGNOLIIDS**

APOCYNACEAE – DOGBANE FAMILY (includes Asclepiadaceae)
Asclepias albicans S. Watson. White-stem Milkweed; *jumate, candelilla*
CP: *Engard 912* (ASU). **TA**: *Shreve 5941*.
Asclepias erosa Torrey. Giant Sand-milkweed, Desert Milkweed; *hierba del cuervo*
CP: *RSF 92-622*. **TA**: *Simmons 21 May 1965*.
Asclepias linaria Cavanilles. Narrow-leaf Milkweed
OP: *Darrow 3856*.
Asclepias nyctaginifolia A. Gray. Mojave Milkweed
OP: *Wirt 10 Aug 1990*.
Asclepias subulata Decaisne. Desert Reed-stem Milkweed, Rush Milkweed; *jumete, mata candelilla*
CP: *Harlan 447*. **OP**: *Bowers 1538* (ORPI). **TA**: *RSF 04-03*.
Funastrum hartwegii (Vail) Schlechter [*F. cynanchoides* (Decaisne) Schlechter var. *hartwegii* (Vail) Krings. *Sarcostemma cynanchoides* Decaisne subsp. *hartwegii* (Vail) R. W. Holm. *Funastrum heterophyllum* (Engelmann ex Torrey) Standley]. Climbing Milkweed; *güirote*
CP: *Duncan 28 Mar 1970*. (CAB). **OP**: *Parker 7982*. **TA**: *TRV 9–10 Mar 1980*.
Haplophyton cimicidum A. de Candolle [*H. cimicidum* var. *crooksii* L. D. Benson. *H. crooksii* (L. D. Benson) L. D. Benson]. Cockroach Plant; *hierba de la cucaracha*
OP: *Supernaugh 432*.
Matelea cordifolia (A. Gray) Woodson. Heart-leaf Milkweed Vine
OP: *Supernaugh 440* (ORPI).
Matelea parvifolia (Torrey) Woodson. Spearleaf
CP: *RSF 94-29*. **OP**: *Mulroy 2 May 1970*.
Metastelma arizonicum A. Gray [*Cynanchum arizonicum* (A. Gray) Shinners]
OP: *Darrow 2436*.

ASCLEPIADACEAE, see **APOCYNACEAE**

ASTERACEAE (COMPOSITAE) – ASTER OR DAISY FAMILY

Acamptopappus sphaerocephalus (Harvey & A. Gray) A. Gray var. **sphaerocephalus**. Goldenhead
OP: *Tinkham 18 Apr 1942.*

Acourtia nana (A. Gray) Reveal & R.M. King [*Perezia nana* A. Gray]. Desert Holly
OP: *SR 20061007-1.*

Acourtia wrightii (A. Gray) Reveal & R. M. King [*Perezia wrightii* A. Gray]. Brown-foot
CP: *RSF 93-306.* **OP**: *Bowers 1702.*

Adenophyllum porophylloides (A. Gray) Strother [*Dyssodia porophylloides* A. Gray]. Dogweed
CP: *RSF 92-735.* **OP**: *TRV 85-109.*

Ageratina paupercula (A. Gray) R. M. King & H. Robinson [*Eupatorium pauperculum* A. Gray]. Santa Rita Snakeroot
OP: *Darrow & Gould 4686.*

Ambrosia ambrosioides (Cavanilles) W. W. Payne [*Franseria ambrosioides* Cavanilles]. Canyon Ragweed; *chicura*; ñuñui jej
CP: *Vorhies 11 Apr 1924.* **OP**: *Mearns 2736* (US). **TA**: *TRV 9-10 Mar 1980.*

Ambrosia confertiflora de Candolle. Slim-leaf Bur-sage; *estafiate*; mo'ostalk
CP: *RSF 92-538.* **OP**: *Bowers 915.*

Ambrosia cordifolia (A. Gray) W. W. Payne [*Franseria cordifolia* A. Gray]. Heart-leaf Bur-sage
OP: *Shreve 6198.*

Ambrosia deltoidea (Torrey) W. W. Payne [*Franseria deltoidea* Torrey]. Triangle-leaf Bur-sage; *chamizo forrajero;* tadsad, va:gita
CP: *RSF 92-680.* **OP**: *RSF 90-401.* **TA**: *TRV 26 Mar 1983.*

Ambrosia dumosa (A. Gray) W. W. Payne [*Franseria dumosa* A. Gray]. White Bur-sage; *chamizo*; tadsad
CP: *Shreve 5918.* **OP**: *Bowers 991.* **TA**: *RSF 04-07.*

Ambrosia dumosa × **A. ilicifolia** (putative hybrid)
TA: *RSF 98-136.*

Ambrosia ilicifolia (A. Gray) W. W. Payne [*Franseria ilicifolia* A. Gray]. Holly-leaf Bur-sage
CP: *Goodding 30 Nov 1938.* **TA**: *Vorhies 16 Apr 1924.*

Ambrosia monogyra (Torrey & A. Gray) Strother & B. G. Baldwin [*Hymenoclea monogyra* Torrey & A. Gray]. Slender Burrobrush; *jécota*; 'i:vadhod
CP: *RSF 87-261.* **OP**: *RSF 87-261.*

Ambrosia salsola (Torrey & A. Gray) Strother & B. G. Baldwin var. **pentalepis** (Rydberg) Strother & B. G. Baldwin [*Hymenoclea salsola* Torrey & A. Gray var. *pentalepis* (Rydberg) L. D. Benson]. White Burrobrush, Cheesebush; 'i:wadhod
CP: *RSF 93-166.* **OP**: *Mearns 2768* (US). **TA**: *Webster 24245.*

Arida arizonica (R. C. Jackson & R. R. Johnson) D. R. Morgan & R. L. Hartman [*Machaeranthera arizonica* R. C. Jackson & R. R. Johnson. *M. arida* B. L. Turner & D. B. Horne. *M. coulteri* (A. Gray) B. L. Turner & D. B. Horne var. *arida* (B. L. Turner & D. B. Horne) B. L. Turner. *M. ammophila* Reveal. *Psilactis coulteri* A. Gray]. Arid Tansy-aster
CP: *RSF 93-435.* **OP**: *Jackson 3043-2* (isotype of *M. arizonica*).

Arida carnosa (A. Gray) D. R. Morgan & R. L. Hartman [*Aster carnosus* (A. Gray) A. Gray ex Hemsley, not *A. carnosus* Gilbert. *A. intricatus* (A. Gray) S. F. Blake. *Leucosyris carnosa* (A. Gray) Greene. *Machaeranthera carnosa* (A. Gray) G. L. Nesom var. *intricata* (A. Gray) G. L. Nesom]. Alkali Aster
OP: *Stimson 233.*

Artemisia dracunculus Linnaeus [*A. dracunculoides* Pursh]. Tarragon; *estragon*
OP: *Goodding 484-45.*

Artemisia ludoviciana Nuttall subsp. **albula** (Wooton) D. D. Keck. Western Mugweed, White Sage, Silver Wormwood; *estafiate*
OP: *Harbison 26269.*

Baccharis brachyphylla A. Gray. Short-leaf Baccharis
CP: *RSF 92-533.* **OP**: *Warren 10 Nov 1983.* **TA**: *Goodding 1186.*

Baccharis salicifolia (Ruiz & Pavón) Persoon subsp. **salicifolia** [*B. glutinosa* Persoon]. Seep Willow; *batamote*; susk
CP: *RSF 92-576.* **OP**: *Nichol 28 Apr 1939.*

Baccharis sarothroides A. Gray. Desert Broom; *escoba amarga, romerillo*; susk kuagig
CP: *RSF 92-706.* **OP**: *Mearns 2775* (US). **TA**: *RSF 04-26, 04-27.*
Bahiopsis parishii (Greene) E. E. Schilling & Panero [*Viguiera parishii* Greene. *V. deltoidea* A. Gray var. *parishii* (Greene) Vasey & Rose]. Parish's Goldeneye; *ariosa*
CP: *RSF 93-295.* **OP**: *Harbison 26168.* **TA**: *RSF 04-84.*
Baileya multiradiata Harvey & A. Gray. Many-flowered Desert-marigold; gi:ko
CP: *RSF 92-747.* **OP**: *Nichol 17 Apr 1939.*
Baileya pleniradiata Harvey & A. Gray. Woolly Desert-marigold
CP: *Benson 10782.* **OP**: *Bowers 1171.* **TA**: *RSF 05-48.*
Bebbia juncea (Bentham) Greene var. **aspera** Greene. Sweetbush, Chuckwalla Delight; hauk 'u'us
CP: *Simmons 2 Oct 1963.* **OP**: *Benson 9907.* **TA**: *TRV 5 Mar 1983.*
Brickellia atractyloides A. Gray var. **atractyloides**. Spiny-leaf Brickellbush
CP: *RSF 92-583.* **TA**: *Vorhies 16 Apr 1924.*
Brickellia californica (Torrey & A. Gray) A. Gray. California Brickellbush
OP: *Bowers 929* (ORPI).
Brickellia coulteri A. Gray var. **coulteri**. Triangle-leaf Brickellbush; *pachaba*
CP: *RSF 93-271.* **OP**: *Harbison 26143.*
Brickellia frutescens A. Gray. Shrubby Brickellbush
OP: *Darrow 3841.*
Calycoseris wrightii A. Gray. White Tack-stem
CP: *RSF 93-340.* **OP**: *Parker 7926.* **TA**: *RSF 05-145.*
****Carthamus tinctorius** Linnaeus. Safflower; *cártamo*
OP: *Bowers 1717* (ORPI).
***Centaurea melitensis** Linnaeus. Malta Star Thistle
CP: *RSF 92-716.* **OP**: *RSF 89-251.*
Chaenactis carphoclinia A. Gray var. **carphoclinia**. Pebble Pincushion
CP: *RSF 93-403.* **OP**: *RSF 03-352.* **TA**: *TRV 26 Mar 1983.*
Chaenactis stevioides Hooker & Arnott. Desert Pincushion
CP: *RSF 93-369.* **OP**: *Nichol 14 Mar 1939.* **TA**: *Lindquist 26 Mar 1983.*
Cirsium neomexicanum A Gray. New Mexico Thistle; *cardo*; gewel
OP: *Gould 31 Mar 1948.*
Diaperia verna (Rafinesque) Morefield var. **verna** [*Evax multicaulis* de Candolle. *E. verna* Rafinesque var. *verna*]. Spring Pygmy Cudweed, Rabbit Tobacco
CP: *Harlan 167.* **OP**: *SR 2003-391.*
Dieteria asteroides Torrey var. **glandulosa** (B. L. Turner) D. R. Morgan & R. L. Hartman [*Machaeranthera asteroides* (Torrey) Greene var. *glandulosa* B. L. Turner]. Fall Tansy-aster
OP: *Goodding 485-45.*
Eclipta prostrata (Linnaeus) Linnaeus [*E. alba* (Linnaeus) Hasskarl. *E. erecta* Linnaeus]. False Daisy; *chile de agua, hierba del tajo*
OP: *Niles 724.*
Encelia farinosa A. Gray ex Torrey. Brittlebush; *incienso, hierba del bazo, rama blanca*; tohaves
CP: *RSF 92-54.* **OP**: *McDougall 55.* **TA**: *Goodding 2204.*
Encelia farinosa × E. frutescens
OP: *Bowers 1131.* **TA**: *RSF 01-585.*
Encelia frutescens (A. Gray) A. Gray. Button Encelia
CP: *Lehto L23586* (ASU). **OP**: *Bowers 1130.* **TA**: *RSF 04-65.*
Ericameria cuneata (A. Gray) McClatchie var. **spathulata** (A. Gray) H. M. Hall [*Haplopappus cuneatus* A. Gray var. *spathulata* (A. Gray) S. F. Blake]. Wedgeleaf Goldenbush
OP: *RSF 90-513.*
Ericameria laricifolia (A. Gray) Shinners [*Haplopappus laricifolius* A. Gray]. Turpentine Bush
OP: *Bowers 969.*
***Erigeron canadensis** Linnaeus [*Conyza canadensis* (Linnaeus) Cronquist]. Horseweed; *cola de caballo*
CP: *RSF 92-568.* **OP**: *RSF 87-322.*
Erigeron lobatus A. Nelson. Desert Fleabane
CP: *RSF 93-325.* **OP**: *RSF 86-182.* **TA**: *RSF 98-118.*

Eriophyllum lanosum (A. Gray) A. Gray [*Antheropeas lanosum* (A. Gray) Rydberg]. Woolly Daisy
CP: *Whipple 3944*. **OP**: *Harlan 03-6*.

Gaillardia arizonica A. Gray [*G. arizonica* var. *pringlei* (Rydberg) S. F. Blake]. Arizona Blanket-flower
CP: *Malusa 18 Apr 2001*. **OP**: *McDougall 63*.

Gamochaeta stagnalis (I. M. Johnston) Anderberg [*Gnaphalium stagnale* I. M. Johnston]. Desert Cudweed, Rosy Everlasting
OP: *SR 20050318-9*.

Geraea canescens Torrey & A. Gray. Desert Sunflower, Desert Gold
CP: *Shreve 5927*. **OP**: *McDougall 8*. **TA**: *TRV 27 Mar 1983*.

Gutierrezia arizonica (A. Gray) M. A. Lane [*Greenella arizonica* A. Gray]. Arizona Snakeweed
CP: *RSF 93-367*. **OP**: *Bowers 1154*.

Gutierrezia sarothrae (Pursh) Britton & Rusby. Broom Snakeweed, Ruby Matchweed; *hierba de la víbora*; siw tadsagĭ
CP: *RSF 92-584*. **OP**: *Bowers 935*.

Gymnosperma glutinosum (Sprengel) Lessing [*Selloa glutinosa* Sprengel]. Gumhead
CP: *Benson 10802*. **OP**: *Bowers 988*. **TA**: *McLaughlin 1969*.

****Helianthus annuus** Linnaeus. Sunflower; *mirasol*
OP: *SR 21 Jul 1998* (ORPI).

Helianthus niveus (Bentham) Brandegee subsp. **tephrodes** (A. Gray) Heiser. Dune Sunflower; *mirasol de las dunas*; hi:wai
CP: *RSF 92-775*.

Hymenothrix wislizeni A. Gray. Thimblehead
CP: *RSF 92-536*. **OP**: *Harbison 26196*.

Hymenoxys odorata de Candolle. Bitterweed
CP: *RSF 93-382*.

Isocoma acradenia (Greene) Greene var. **acradenia** [*Haplopappus acradenius* (Greene) S. F. Blake]. Alkali Goldenbush
CP: Tule Well (Simmons 1965, 1966). **OP**: *Simmons 11 Oct 1963*.

Koanophyllon palmeri (A. Gray) R. M. King & H. Robinson [*Enpatorium palmeri* A. Gray (a segregate of *E. solidaginifolium* A. Gray)]. Umbrella Thoroughwort
CP: Tule Well (Simmons 1965, 1966). **OP**: *RSF 90-528*.

***Lactuca serriola** Linnaeus. Prickly Lettuce, Compass Plant
CP: *RSF 93-375*. **OP**: *Bowers 1756*. **TA**: *RSF 10-162*.

Laennecia coulteri (A. Gray) G. L. Nesom [*Conyza coulteri* A. Gray]. Coulter's Horseweed
CP: *Harlan 269* (CAB). **OP**: *RSF 87-291*. **TA**: *RSF 02-14*.

Logfia arizonica (A. Gray) Holub [*Filago arizonica* A. Gray]. Arizona Fluffweed
CP: *RSF 92-561*. **OP**: *RSF 88-274*. **TA**: *RSF 98-114*.

Logfia depressa (A. Gray) Holub [*Filago depressa* A. Gray]. Dwarf Fluffweed
CP: *RSF 93-400*. **OP**: *Lehto 6-15440-b* (ASU, mixed sheet with *Stylocline gnaphaloides*).

Logfia filaginoides (Hooker & Arnott) Morefield [*L. californica* (Nuttall) Holub. *Filago californica* Nuttall]. California Fluffweed
CP: *RSF 92-573*. **OP**: *Bowers 1248*. **TA**: *RSF 98-144*.

Machaeranthera tagetina Greene [*Aster tagetinus* (Greene) S. F. Blake]. Mesa Tansyaster
OP: *RSF 05-219*.

Malacothrix fendleri A. Gray. Fendler's Desert-dandelion
CP: *Cuttler 17 Mar 1995* (CAB). **OP**: *RSF 03-259*.

Malacothrix glabrata (A. Gray ex D. C. Eaton) A. Gray [*M. californica* de Candolle var. *glabrata* A. Gray ex D. C. Eaton]. Desert Dandelion
CP: *McLaughlin 2983*. **OP**: *SR 2003-399*.

Malacothrix sonorae W. S. Davis & P. H. Raven. Sonoran Desert Dandelion
CP: *Harlan 220*. **OP**: *Niles 554*.

Monoptilon bellioides (A. Gray) H. M. Hall. Mojave Desert Star
CP: *SR & Tibbitts 18 Feb 2002*. **OP**: *Benson 10625*. **TA**: *Halse 31 Mar 1973*.

***Oncosiphon piluliferum** (Linnaeus f.) Källersjö [*Matricaria globifera* (Thunberg) Frezl ex Harvey]. Pineapple-weed, False Chamomile; *manzanilla*
OP: *SR 15 Apr 2005.* **CP**: *Harlan 165.*
Packera quercetorum (Greene) C. Jeffrey [*Senecio quercetorum* Greene]. Oak Creek Ragwort
OP: *Bowers 1284.*
Palafoxia arida B. L. Turner & M. I. Morris var. **arida**. Spanish Needles
CP: *Benson 10787.* **OP**: *RSF 88-406.* **TA**: *TRV 27 Mar 1983.*
Parthenice mollis A. Gray. Annual Monsterwort
OP: *SR 20031025-13.*
Pectis cylindrica (Fernald) Rydberg. Sonoran Chinchweed
CP: *RSF 01-566.*
Pectis linifolia Linnaeus var. **linifolia** [*P. linifolia* var. *marginalis* Fernald. *P. punctata* Jacquin]. *Romero macho*
OP: *Wirt 13 Aug 1990.*
Pectis papposa Harvey & A. Gray var. **papposa**. Desert Chinchweed; *manzanilla del coyote*; ban manzani:ya
CP: *RSF 92-557.* **OP**: *Bowers 1535.* **TA**: *RSF 04-56.*
Perityle ajoensis Todsen. Ajo Rock Daisy
OP: *Todsen 2292* (isotypes ARIZ, ORPI).
Perityle emoryi Torrey. Desert Rock Daisy
CP: *Whipple 3912.* **OP**: *McDougall 50.* **TA**: *RSF 04-57.*
Peucephyllum schottii A. Gray. Pygmy-cedar; *romero del desierto*
CP: *Hodgson 2752* (DES). **TA**: *TRV 5 Mar 1983.*
Pleurocoronis laphamioides (Rose) R. M. King & H. Robinson [*Hofmeisteria laphamioides* Rose]
OP: *Gould 3019.*
Pleurocoronis pluriseta (A. Gray) R.M. King & H. Robinson [*Hofmeisteria pluriseta* A. Gray]. Arrow-leaf; *canutillo*
CP: *Benson 10804.* **TA**: *Goodding 2103.*
Pluchea odorata (Linnaeus) Cassini var. **odorata** [*P. purpurascens* (Swartz) de Candolle]. Saltmarsh-fleabane, Alkali Camphor-weed; *jara*
OP: *RSF 86-204.*
Pluchea sericea (Nuttall) Coville [*Tessaria sericea* (Nuttall) Shinners]. Arrow-weed; *cachanilla*; komagĭ 'u'us, 'u'us kokomadk
OP: *Bowers 1315.*
Porophyllum gracile Bentham. Slender Poreleaf; *odora, hierba del venado*
CP: *SR 2003-19.* **OP**: *RSF 88-118* (ORPI). **TA**: *TRV 5 Mar 1983.*
Prenanthella exigua (A. Gray) Rydberg [*Lygodesmia exigua* (A. Gray) A. Gray]. Brightwhite
CP: *Bowers 2996.* **OP**: *Gould 2990.* **TA**: *RSF 98-132.*
Psathyrotes ramosissima (Torrey) A. Gray. Desert Velvet, Turtleback
CP: *Yeatts 3246* (CAB). **TA**: *Halse 31 Mar 1973.*
Pseudognaphalium canescens (de Candolle) Anderberg [*Gnaphalium canescens* de Candolle. *G. wrightii* A. Gray]. Wright's Cudweed
OP: *Bowers 1927.*
Psilostrophe cooperi (A. Gray) Greene. Paper-daisy, Paper-flower
CP: *RSF 93-302.* **OP**: *McDougal* 22 Mar 1941.
Rafinesquia californica Nuttall. California Chicory
CP: *RSF 93-299.* **OP**: *McDougall 29.*
Rafinesquia neomexicana A. Gray. Desert Chicory
CP: *Harbison 26156.* **OP**: *Shreve 6206.* **TA**: *McLaughlin 1974.*
Senecio flaccidus Lessing var. **monoensis** (Greene) B. L. Turner & T. M. Barkley [*S. monoensis* Greene]. Sandwash Groundsel, Threadleaf Ragwort
OP: *Bowers 1600.*
Senecio lemmonii A. Gray. Lemmon Groundsel
CP: *Simmons 24 Jan 1965.* **OP**: *Kearney 10849.*
Senecio mohavensis A. Gray. Mojave Groundsel, Mohave Ragwort
CP: *RSF 93-91.* **OP**: *McDougall 76.* **TA**: *TRV 26 Mar 1983.*

***Sonchus asper** (Linnaeus) Hill subsp. **asper**. Prickly Sow Thistle; *chinita*; ho'idkam, 'i:vakĭ
CP: *RSF 93-98*. **OP**: *Nichol* 4 May 1939. **TA**: *RSF 02-10*.
***Sonchus oleraceus** Linnaeus. Common Sow Thistle; *chinita*; hauvĭ, hehewo
OP: *Bowers 1594*. **TA**: Frontera Canyon, 18 Mar 1998, *RSF*, observation.
Stephanomeria exigua Nuttall subsp. **exigua**. Wire-lettuce
OP: *SR 2003-457*.
Stephanomeria pauciflora (Torrey) A. Nelson. Desert-straw, Desert Wire-lettuce
CP: *Cain 15 Nov 2003*. **OP**: *RSF 86-293*. **TA**: *TRV 86-144*.
Stephanomeria schottii (A. Gray) A. Gray. Schott's Wire-lettuce
CP: *Reeves 6780*.
Stylocline gnaphaloides Nuttall [*S. arizonica* Coville]. Everlasting Neststraw
OP: *Lehto 6-15440-b* (ASU, mixed sheet with *Logfia depressa*).
Stylocline micropoides A. Gray. Desert Neststraw
CP: *Whipple 3926*. **OP**: *Niles 553*. **TA**: *RSF 98-143*.
Thymophylla concinna (A. Gray) Strother [*Dyssodia concinna* (A. Gray) B. L. Robinson]. Dogweed; *manzanilla de coyote*; ban mansani:ya
CP: *Niles 341*. **OP**: *RSF 88-119*.
Thymophylla pentachaeta (de Candolle) Small var. **belenidium** (de Candolle) Strother [*Dyssodia pentachaeta* (de Candolle) B. L. Robinson var. *belenidium* (de Candolle) Strother]. Five-needle Prickly-leaf
CP: *RSF 92-636A*. **OP**: *Beal 10 Mar 1987* (ORPI).
Townsendia annua Beaman. Annual Townsend Daisy
OP: *SR 2003-287*.
Trichoptilium incisum (A. Gray) A. Gray. Yellow-head
CP: *RSF 92-776*. **OP**: *SR 2003-316* (ORPI). **TA**: *TRV 10 Mar 1986*.
Trixis californica Kellogg var. **californica**. California Threefold
CP: *Reichenbacher 470*. **OP**: *Lockwood 162*. **TA**: *Vorhies 16 Apr 1924*.
Uropappus lindleyi (de Candolle) Nuttall [*Microseris linearifolia* (de Candolle) Schultz Bipontinus. *M. lindleyi* (de Candolle) A. Gray]. Silverpuffs
CP: *RSF 93-352*. **OP**: *McDougall 98*.
****Verbesina encelioides** (Cavanilles) Bentham & Hooker f. ex A. Gray subsp. **exauriculata** (B. L. Robinson & Greenman) J. R. Coleman. Golden Crownbeard
OP: *Harbison 26271* (SD).
Xanthisma gracile (Nuttall) D. R. Morgan & R. L. Hartman [*Haplopappus gracilis* (Nuttall) A. Gray. *Machaeranthera gracilis* (Nuttall) Shinners]. Slender Goldenweed
OP: *Bowers 1698*.
Xanthisma spinulosum (Pursh) D. R. Morgan & R. L. Hartman var. **gooddingii** (A. Nelson) D. R. Morgan & R. L. Hartman [*Haplopappus spinulosus* (Pursh) de Candolle subsp. *gooddingii* (A. Nelson) H. M. Hall. *Machaeranthera pinnatifida* (Hooker) Shinners var. *gooddingii* (A. Nelson) B. L. Turner & Hartman]. Spiny Goldenweed
CP: *Whipple 3932*. **OP**: *Cooper 554*. **TA**: *Kurtz 1169*.
Zinnia acerosa (de Candolle) A. Gray. Desert Zinnia; *zinia del desierto*
OP: *Bowers 1692*.

BERBERIDACEAE – BARBERRY FAMILY
Berberis haematocarpa Wooton [*Mahonia haematocarpa* (Wooton) Fedde]. Red Barberry
OP: *Niles 536*.
Berberis harrisoniana Kearney & Peebles. Kofa Mountain Barberry
OP: *Phillips 76-2*.

BIGNONIACEAE – BIGNONIA FAMILY
Chilopsis linearis (Cavanilles) Sweet subsp. **arcuata** (Fosberg) Henrickson. Desert-willow; *mimbre*
CP: *RSF 92-547*. **OP**: *SR 20061008-13*.

BORAGINACEAE – BORAGE FAMILY (includes Hydrophyllaceae)

Amsinckia intermedia Fischer & C. A. Meyer. Devil's Lettuce, Fiddleneck; cetkom
CP: *RSF 93-58*. **OP**: *RSF 88-305*. **TA**: *TRV 5 Mar 1983*.

Amsinckia tessellata A. Gray var. **tessellata**. Desert Fiddleneck; cetkom
CP: *RSF 93-181*. **OP**: *Cooper 727*. **TA**: *RSF 10-161*.

Cryptantha angustifolia (Torrey) Greene. Narrow-leaf Cryptantha, Desert Cryptantha
CP: *Shreve 6219*. **OP**: *Bowers 1593*. **TA**: *TRV 5 Mar 1983*.

Cryptantha barbigera (A. Gray) Greene. Bearded Cryptantha
CP: *Kearney 1088*. **OP**: *RSF 87-260*. **TA**: *RSF 98-137*.

Cryptantha ganderi I. M. Johnston. Dune Cryptantha
CP: *RSF 93-388*.

Cryptantha holoptera (A. Gray) J. F. Macbride. Winged Cryptantha
CP: *Benson 10791*.

Cryptantha maritima (Greene) Greene [includes var. *maritima* and var. *pilosa* I. M. Johnston]. White-haired Cryptantha
CP: *Benson 10758*. **OP**: *Gould 3005*. **TA**: *Kearney 10905*.

Cryptantha micrantha (Torrey) I. M. Johnston subsp. **micrantha**. Dwarf Cryptantha
CP: *Shreve 6217*. **TA**: *Butterwick 6265*.

Cryptantha pterocarya (Torrey) Greene var. **cycloptera** (Greene) J. F. Macbride. Wing-nut Cryptantha
CP: *Kearney 10893*. **OP**: *McDougall 19*. **TA**: *TRV 10 Mar 1980*.

Cryptantha racemosa (S. Watson ex A. Gray) Greene. Bushy Cryptantha
TA: *TRV 5 Mar 1983*.

Eucrypta chrysanthemifolia (Bentham) Greene var. **bipinnatifida** (Torrey) Constance. Spotted Hideseed
CP: *Daniel 2656* (ASU). **OP**: *Benson 10661*.

Eucrypta micrantha (Torrey) A. Heller. Desert Hideseed; *peluda*
CP: *SR 2003-40*. **OP**: *McDougall 43*. **TA**: *TRV 5 Mar 1983*.

Harpagonella palmeri A. Gray. Palmer's Grappling-hook
OP: *RSF 05-218*.

Heliotropium curassavicum Linnaeus [*H. curassavicum* var. *oculatum* (A. Heller) I. M. Johnston ex Tidestrom]. Alkali Heliotrope; *hierba del sapo*; babad 'i:vakĭ, kakaicu 'i:vakĭ
CP: *RSF 92-577*. **OP**: *McDougall 90*.

Lappula redowskii (Hornemann) Greene var. **cupulata** (A. Gray) M. E. Jones [*L. occidentalis* (S. Watson) Greene]. Crowned Stickseed
CP: *Kearney 11029*. **OP**: *Parker 7990*.

Nama demissum A. Gray var. **demissum**. Purple Mat
CP: *RSF 93-442*. **TA**: *RSF 98-112*.

Nama hispidum A. Gray var. **spathulatum** (Torrey) C. L. Hitchcock [*N. coulteri* A. Gray]. Bristly Nama
CP: *SR 18 Feb 2002*. **OP**: *Fay 744*. **TA**: *RSF 04-52*.

Pectocarya heterocarpa (I. M. Johnston) I. M. Johnston. Mixed-nut Comb-bur
CP: *Parker 7936*. **OP**: *Parker 7936*. **TA**: *TRV 5 Mar 1983*.

Pectocarya platycarpa (Munz & I. M. Johnston) Munz & I. M. Johnston. Broad-winged Comb-bur
CP: *Whipple 3949*. **OP**: *Benson 10664*. **TA**: *TRV 5 Mar 1983*.

Pectocarya recurvata I. M. Johnston. Arched Comb-bur
CP: *RSF 93-362*. **OP**: *Parker 7936A*.

Phacelia affinis A. Gray. Limestone Phacelia
OP: *Bowers 1069* (ORPI).

Phacelia coerulea Greene. Sky-blue Phacelia
CP: *Lehto L 23535* (ASU). **OP**: *Kearney 10824*.

Phacelia crenulata Torrey ex S. Watson var. **ambigua** (M. E. Jones) J. F. Macbride [*P. ambigua* M. E. Jones. *P. minutiflora* J. W. Voss ex Munz]. Desert Heliotrope
CP: *Reeves 6766* (ASU). **OP**: *Bowers 1028*. **TA**: *TRV 5 Mar 1983*.

Phacelia distans Bentham. Caterpillar Phacelia, Fernleaf Phacelia
CP: *McManus 661*. **OP**: *Kearney 10853*.

Phacelia neglecta M. E. Jones. Alkali Phacelia
CP: *Lehto L23540* (ASU). **OP**: *TRV 85-8.* **TA**: *RSF 05-62.*
Phacelia pedicellata A. Gray. Pedicellate Phacelia
CP: *Irwin 93* (ASU). **OP**: *Niles 552.* **TA**: *RSF 98-145.*
Phacelia ramosissima Douglas ex Lehmann [*P. ramosissima* var. *latifolia* (Torrey) Cronquist]. Branching Phacelia
OP: *Harbison 26261.*
Phacelia rotundifolia Torrey ex S. Watson. Roundleaf Phacelia
OP: *Christy 1263* (ASU).
Pholistoma auritum (Lindley) Lilja ex Lindblom var. **arizonicum** (M. E. Jones) Constance. Blue Fiesta-flower
CP: *RSF 93-62.* **OP**: *Kearney 10817.*
Plagiobothrys arizonicus (A. Gray) Greene ex A. Gray. Arizona Popcorn-flower
OP: *RSF 03-271.*
Plagiobothrys jonesii A. Gray. Mojave Popcorn-flower
OP: *TRV 19 Feb 1984.*
Tiquilia canescens (A. de Candolle) A. T. Richardson var. **pulchella** (I. M. Johnston) A. T. Richardson. Woody Crinklemat
CP: *TRV 9 Mar 1980.* **OP**: *SR 2003-211.*
Tiquilia palmeri (A. Gray) A.T. Richardson. Palmer's Crinklemat
CP: *RSF 93-410.* **TA**: *TRV 27 Mar 1983.*

BRASSICACEAE (CRUCIFERAE) – MUSTARD FAMILY
Boechera perennans (S. Watson) W. A. Weber [*Arabis perennans* S. Watson]. Perennial Rockcress
OP: *Nichol 14 Mar 1939.*
****Brassica nigra** (Linnaeus) W. D. J. Koch. Black Mustard; *mostaza negra*
OP: *SR 2003-449.*
***Brassica tournefortii** Gouan. Sahara Mustard; *mostaza*
CP: *RSF 93-418.* **OP**: *Bowers 1030.* **TA**: *RSF 04-33.*
****Capsella bursa-pastoris** (Linnaeus) Medikus. Shepherd's Purse; *hierba del pastor*
CP: *RSF 93-201.*
Caulanthus lasiophyllus (Hooker & Arnott) Payson [*Guillenia lasiophylla* (Hooker & Arnott) Greene. *Thelypodium lasiophyllum* (Hooker & Arnott) Greene]. California Mustard
CP: *Reeves 6822* (ASU). **OP**: *RSF 88-133.* **TA**: *Reeves 5404* (ASU).
Descurainia pinnata (Walter) Britton subsp. **ochroleuca** (Wooton) Detling. Western Tansy Mustard; *pamita*; su'uvad
CP: *RSF 93-277.* **OP**: *Nichol 14 Mar 1939.* **TA**: *RSF 05-152.*
Dimorphocarpa pinnatifida Rollins. Dune Spectacle-pod
CP: *RSF 92-27.* **TA**: *RSF 98-138.*
Dithyrea californica Harvey. California Spectacle-pod
CP: *RSF 92-28.* **TA**: *TRV 27 Mar 1983.*
Draba cuneifolia Nuttall ex Torrey & A. Gray [*D. cuneifolia* var. *integrifolia* S. Watson. *D. cuneifolia* var. *sonorae* (Greene) Parish]. Wedgeleaf Draba
CP: *RSF 93-62.* **OP**: *Bowers 1006.* **TA**: *RSF 05-36.*
***Eruca vesicaria** (Linnaeus) Cavanilles subsp. **sativa** (Miller) Thellung [*E. sativa* Miller]. Garden-rocket, Salad-rocket, Arugala
OP: *Conner 16 Feb 2005.*
Erysimum capitatum (Douglas ex Hooker) Greene [perhaps *E. capitatum* var. *purshii* (Durand) Rollins]. Western Wallflower
OP: *Tinkham* 15 Apr 1942.
Hesperidanthus linearifolius (A. Gray) Rydberg [*Schoenocrambe linearifolia* (A. Gray) Rollins. *Sisymbrium linearifolium* (A. Gray) Payson. *Thelypodiopsis linearifolia* (A. Gray) Al-Shehbaz]. Purple Rock-mustard
OP: *Bowers 1090.*
Lepidium densiflorum Schrader. Common Peppercress, Coommon Pepper-weed
OP: *Bowers 1063.*

Lepidium lasiocarpum Nuttall subsp. **lasiocarpum**. Sand Pepper-weed; *lentejilla*
CP: *RSF 93-426*. **OP**: *Shreve 6203*. **TA**: *TRV10 Mar 1980*.
Lepidium thurberi Wooton. Arizona Pepper-weed
OP: *McDougall 32*.
Lyrocarpa coulteri Hooker & Harvey. Lyre-pod; ban censañig
CP: *Goodding 1554*. **OP**: *Parker 7914*. **TA**: *Harrison 6563*.
****Matthiola longipetala** (Ventenat) de Candolle [*M. bicornis* (Sibthorp & Smith) de Candolle]. Night-scented Stock
OP: *SR 27 Apr 2005*.
****Nasturtium officinale** W. T. Aiton [*Rorippa nasturtium-aquaticum* (Linnaeus) Hayek]. Watercress; *berro*
OP: Williams Spring (extirpated, Felger et al. 1992).
Physaria tenella (A. Nelson) O'Kane & Al-Shehbaz [*Lesquerella tenella* A. Nelson]. Desert Bladderpod
CP: *RSF 92-60*. **OP**: *McDougall 15*. **TA**: *TRV 5 Mar 1983*.
Sibara angelorum (S. Watson) Greene. Angled Rockcress
CP: *Lehto L23523* (ASU).
Sibara virginica (Linnaeus) Rollins. Winged Rockcress
CP: *Harlan 495*.
****Sisymbrium altissimum** Linnaeus. Tumble Mustard, Jim Hill Mustard
OP: *SR 15 Mar 2005* (ORPI).
***Sisymbrium irio** Linnaeus. London Rocket; *pamitón*; ban cinsañig
CP: *RSF 92–64*. **OP**: *Kearney 10830*.
***Sisymbrium orientale** Linnaeus. Indian hedge-mustard
CP: *RSF 05-158*. **OP**: *SR 20050315-1*.
Streptanthella longirostris (S. Watson) Rydberg. Long-beak Twist-flower
CP: *RSF 92-20*. **OP**: *Baker 7701* (ORPI).
Streptanthus carinatus C. Wright ex A. Gray subsp. **arizonicus** (S. Watson) Kruckenberg, Rodman, & Worthington [*S. arizonicus* var. *luteus* Kearney & Peebles]. Arizona Jewel Flower
OP: *Nichol 26 Mar 1939*.
Thelypodium wrightii A. Gray [*Stanleyella wrightii* (A. Gray) Rydberg]
OP: *Hesselberg 16 Oct 1966*.
****Thlaspi arvense** Linnaeus. Fanweed, Roadside Pennycress
OP: *Pinkava 9993* (ASU).
Thysanocarpus curvipes Hooker [*T. curvipes* var. *elegans* (Fischer & C. A. Meyer) B. L. Robinson]. Lacepod
CP: *RSF 93-93*. **OP**: *Kearney 10816*.

BURSERACEAE – TORCHWOOD FAMILY
Bursera microphylla A. Gray. Elephant Tree; *torote*; 'usabkam
CP: *Elias 10308*. **OP**: *Bowers 1095*. **TA**: *Vorhies 16 Apr 1924*.

CACTACEAE – CACTUS FAMILY
Carnegiea gigantea (Engelmann) Britton & Rose [*Cereus giganteus* Engelmann]. Saguaro, Sahuaro; *saguaro*; ha:sañ
CP: *Rebman 2884* (DES). **OP**: *RSF 90-70*. **TA**: Tinajas Altas, 19 Mar 1998, *RSF*, observation.
Cylindropuntia acanthocarpa (Engelmann & J. M. Bigelow) F. M. Knuth [*Opuntia acanthocarpa* Engelmann & J. M. Bigelow]. Buckhorn Cholla; *choya*; ciolim (also hanamï, the general term for cholla)
Cylindropuntia acanthocarpa var. **coloradensis** (L. D. Benson) Pinkava [*Opuntia acanthocarpa* var. *coloradensis* L. D. Benson]
CP: *Rebman 2883* (ASU). **OP**: *Baker 7578* (ASU). **TA**: *Reeves R5395* (ASU).

Cylindropuntia acanthocarpa var. **major** (Engelmann & J. M. Bigelow) Pinkava [*Opuntia echinocarpa* Engelmann var. *major* Engelmann. *O. acanthocarpa* var. *major* (Engelmann & J. M. Bigelow) L. D. Benson]

CP: 7 *Harbison 17004 & 17005* (SD). **OP**: *Steenbergh 5-2662-1* (neotype, RSA/POM).

Cylindropuntia acanthocarpa x **C. spinosior**

OP: *Baker 8366* (ASU, SD).

Cylindropuntia arbuscula (Engelmann) F. M. Knuth [*Opuntia arbuscula* Engelmann]. Pencil Cholla; *siviri, tasajo*; vipinoi

OP: *Baker 7573* (ASU).

Cylindropuntia bigelovii (Engelmann) F. M. Knuth [*Opuntia bigelovii* Engelmann]. Teddybear Cholla; *choya güera*; hadsadkam (also hanamĭ, the general term for cholla)

CP: *Benson 10766.* **OP**: *Baker 7588* (ASU, ORPI). **TA**: *Mearns 348* (US).

Cylindropuntia echinocarpa (Engelmann & J. M. Bigelow) F. M. Knuth [*Opuntia echinocarpa* Engelmann & J. M. Bigelow. *O. wigginsii* L. D. Benson]. Silver Cholla

CP: *Rebman 2881* (SD). **TA**: SE of Tinajas Altas Mts, 3 Feb 1990, *RSF*, observation.

Cylindropuntia fulgida (Engelmann) F. M. Knuth [*Opuntia fulgida* Engelmann]. Chain-fruit Cholla; *choya*; hanamĭ

Cylindropuntia fulgida var. **fulgida** [*Opuntia fulgida* var. *fulgida*]

CP: *Rebman 2888* (DES). **OP**: *Harbison 26170.*

Cylindropuntia fulgida var. **mamillata** (Schott ex Engelmann) Backeberg [*Opuntia fulgida* var. *mamillata* (Schott ex Engelmann) J. M. Coulter]

OP: Near Kuakatch, 10 Apr 2000, *SR* (photo).

Cylindropuntia leptocaulis (de Candolle) F.M. Knuth [*Opuntia leptocaulis* de Candolle]. Desert Christmas Cholla; *tasajillo*; 'ajĭ vipinoi, ce'ecem vipinoi

CP: *Rebman 2886* (SD). **OP**: *RSF 88-470.*

Cylindropuntia ramosissima (Engelmann) F. M. Knuth [*Opuntia ramosissima* Engelmann]. Diamond cholla

CP: *Harbison 15 Nov 1937* (SD). **OP**: *Baker 7776* (ASU, ORPI). **TA**: *Reeves 5394* (ASU).

Cylindropuntia spinosior (Engelmann) F. M. Knuth [*Opuntia spinosior* (Engelmann) Toumey]. Cane Cholla

CP: *RSF 92-546.* **OP**: *Harbison 26188* (ARIZ, SD).

Cylindropuntia versicolor (Engelmann ex J. M. Coulter) F. M. Knuth [*Opuntia versicolor* Engelmann]. Staghorn Cholla; *siviri*

OP. *Baker 7752* (ASU).

Echinocactus polycephalus Engelmann & J. M. Bigelow var. **polycephalus**. Many-headed Barrel Cactus, Cottontop Cactus, Cannonball Cactus; *biznaga*

CP: *RSF 92-596.* **TA**: *Reeves 5426* (ASU).

Echinocereus engelmannii (Parry ex Engelmann) Lemaire. Strawberry Hedgehog Cactus; *pitayita*; 'isvigĭ

Echinocereus engelmannii var. **acicularis** L. D. Benson

OP: *Peebles 14555.*

Echinocereus engelmannii var. **chrysocentrus** (Engelmann & J. M. Bigelow) Rümpler

CP: Sheep Mt, 31 Jan 1992, *RSF*, observation. **TA**: *Blackwell 709.*

Echinocereus nicholii (L. D. Benson) B. D. Parfitt [*E. engelmannii* var. *nicholii* L. D. Benson]. Golden Hedgehog Cactus

CP: *RSF 93-280.* **OP**: *Benson 9901.*

Echinocereus santaritensis W. Blum & Rutow. Claret-cup Cactus

OP: *Baker 14050* (ASU).

Echinomastus erectocentrus (J. M. Coulter) Britton & Rose var. **acunensis** (W. T. Marshall) Bravo [*E. acunensis* W. T. Marshall. *Neolloydia erectocentra* (J.M. Coulter) L. D. Benson var. *acunensis* (W. T. Marshall) L. D. Benson]. Acuña Cactus

OP: *Supernaugh 2 Jan 1951* (lectotype, DES; isolectotype, ORPI).

Ferocactus cylindraceus (Engelmann) Orcutt [*F. acanthodes* (Lemaire) Britton & Rose. *F. acanthodes* var. *eastwoodiae* L. D. Benson. *F. acanthodes* var. *lecontei* (Engelmann) G. E. Lindsay]. Mountain Barrel Cactus, Desert Barrel Cactus; *biznaga*; jiavul

CP: *Benson 10809.* **OP**: *RSF 88-456.* **TA**: *RSF 90-5.*

Ferocactus emoryi (Engelmann) Orcutt [*F. covillei* Britton & Rose]. Emory's Barrel Cactus; *biznaga*; jiavul

CP: *Harbison 16849* (SD). **OP**: *Pinkava 14371* (ASU).

Ferocactus wislizeni (Engelmann) Britton & Rose. Compass Barrel Cactus, Fishhook Barrel Cactus; *biznaga*; jiavul

CP: *Harbison 16847* (SD). **OP**: *Benson 9895*.

Grusonia kunzei (Rose) Pinkava [*Opuntia kunzei* Rose. *O. stanlyi* Engelmann ex B. D. Jackson var. *kunzei* (Rose) L. D. Benson. *Corynopuntia kunzei* (Rose) M. P. Griffiths]. Desert Club-cholla, Devil Cholla

CP: *Hodgson 18704* (DES). **OP**: *Mearns 2735* (CAS). **TA**: *Harbison 16999 & 17000* (SD).

Grusonia parishii (Orcutt) Pinkava [*Opuntia parishii* Orcutt. *O. stanlyi* Engelmann ex B.D. Jackson var. *parishii* (Orcutt) L.D. Benson. *O. stanlyi* var. *peeblesiana* L.D. Benson. *Corynopuntia parishii* (Orcutt) F.M. Knuth]. Parish Club-cholla

OP: *RSF 88-110*.

Lophocereus schottii (Engelmann) Britton & Rose var. **schottii** [*Cereus schottii* Engelmann. *Pachycerus schottii* (Engelmann) D. R. Hunt]. Senita; *sinita*; ce:mĭ

CP: *Harbison 17061* (SD). **OP**: *Blakley 323* (DES).

Mammillaria grahamii Engelmann subsp. **grahamii** [Among the many synonyms are: *M. microcarpa* Engelmann. *M. grahamii* var. *arizonica* Quehl. *M. grahamii* var. *oliviae* (Orcutt) L. D. Benson. *M. milleri* (Britton & Rose) Bödeker]. Arizona Fishhook Cactus; *cabeza de viejo*; ban 'isvig, ban cekida

CP: E side Pinacate flow, 31 Jan 1992, *RSF*, observation. **OP**: *Benson 9945*. **TA**: *Reeves 5391* (ASU).

Mammillaria tetrancistra Engelmann. Corkseed Fishhook Cactus; *cabeza de viejo*

CP: *McManus 688*. **OP**: *Steenbergh 1-662-1* (ORPI). **TA**: *RSF 02-6*.

Mammillaria thornberi Orcutt [*M. fasciculata* of authors, not Engelmann]. Thornber Fishhook Cactus; *cabeza de viejo*; ban mauppa

OP: *Harbison 26183* (SD).

Opuntia basilaris Engelmann & J. M. Bigelow var. **basilaris**. Beavertail Cactus

CP: *RSF 92-621*. **TA**: Tinajas Altas Canyon, 28 Apr 2008, *RSF*, observation.

Opuntia chlorotica Engelmann & J. M. Bigelow. Pancake Prickly-pear; *nopal rastrero*

CP: *Harbison 16 Mar 1937* (SD). **OP**: *Nichol 28 Mar 1939* (ORPI).

Opuntia engelmannii Salm-Dyck ex Engelmann. Prickly-pear; *nopal*

Opuntia engelmannii var. **engelmannii** [*O. phaeacantha* Engelmann var. *discata* (Griffiths) L. D. Benson & Walkington]. Desert Prickly-pear; naw, 'i:bhai

CP: Agua Dulce Pass, 12 Jun 1992, *RSF*, observation. **OP**: *RSF 90-430*.

Opuntia engelmannii var. **flavispina** (L. D. Benson) B. D. Parfitt & Pinkava [*O. phaeacantha* var. *flavispina* L. D. Benson]. Yellow-spine Prickly-pear; *nopal*

CP: *RSF 92-737*. **OP**: *Nichol 27 Apr1939* (isotypes: ARIZ, ORPI).

****Opuntia engelmannii** var. **linguiformis** (Griffiths) B. D. Parfitt & Pinkava [*O. linguiformis* Griffiths]. Cow-tongue Prickly-pear

OP: 1 mi E of Lukeville, 3 Nov 2003, *SR*, observation.

Opuntia phaeacantha Engelmann. Brown-spine Prickly-pear; *nopal*

OP: *SR 2003-535* (ARIZ, ORPI).

****Opuntia santa-rita** (Griffiths & Hare) Rose. Purple Prickly-pear

OP: *Nichol 27 Apr 1939* (ORPI, extirpated).

Peniocereus greggii (Engelmann) Britton & Rose var. **transmontanus** (Engelmann) Backeberg [*Cereus greggii* Engelmann var. *transmontanus* Engelmann]. Desert Night-blooming Cereus; *reina de la noche, sarramatraca*; ho'ok wa'o

CP: *Rebman 2890* (ASU). **OP**: *RSF 90-574*. **TA**: *Mearns 2811* (CAS/DS, US).

Peniocereus striatus (Brandegee) Buxbaum [*Cereus striatus* Brandegee. *Neoevansia striata* (Brandegee) Sánchez-Mejorada. *Wilcoxia striata* (Brandegee) Britton & Rose. *Cereus diguetii* F. A. C. Weber. *Wilcoxia diguetii* (F. A. C. Weber) Diguet & Guillaumin]. *Sacamatraca, sarramatraca*; 'i:kulĭ

OP: *Nichol 20 Apr 1939*.

Stenocereus thurberi (Engelmann) Buxbaum [*Cereus thurberi* Engelmann. *Lemaireocereus thurberi* (Engelmann) Britton & Rose]. Organ Pipe; *pitaya, pitaya dulce*; cucuvis
CP: Agua Dulce Mts, photo, 2 June 1963 (Simmons 1965). **OP**: *Hodgson 14* (ASU).

CAMPANULACEAE – BELLFLOWER FAMILY
Nemacladus orientalis (McVaugh) Morin [*N. glanduliferus* Jepson var. *orientalis* McVaugh]. Redtip Thread Plant
CP: *RSF 93-329*. **OP**: *Benson 10663*. **TA**: *RSF 05-147*.
Triodanis biflora (Ruiz & Pavón) Greene. Small Venus Looking-glass
OP: *Bowers 1285*.

CANNABACEAE – HEMP FAMILY (includes Ulmaceae, in part)
Celtis pallida Torrey subsp. **pallida** [*C. tala* Gillies ex Planchon var. *pallida* (Torrey) Planchon]. Desert Hackberry; *garambullo*; kuavulĭ
CP: *RSF 94-25*. **OP**: *Nichol 23 Feb 1939*.
Celtis reticulata Torrey. Netleaf Hackberry; *cúmero*
OP: *Goodding 303-41*.

CAPPARACEAE – CAPER FAMILY
Atamisquea emarginata Miers ex Hooker & Arnott [*Capparis atamisquea* Kuntze]. *Palo hediondo*
OP: *Harbison 26181*.

CAPRIFOLIACEAE, see **ADOXACEAE**

CARYOPHYLLACEAE – PINK FAMILY
Achyronychia cooperi Torrey & A. Gray. Sand-mat, Frost-mat
CP: *Eiber 23*. **OP**: *Parker 7984*. **TA**: *TRV 26 Mar 1983*.
Cerastium texanum Britton. Mouse-ear Chickweed
OP: *RSF 05-270*.
Drymaria viscosa S. Watson. Sticky Drymary
CP: *Hodgson 2080* (DES).
****Herniaria hirsuta** Linnaeus var. **cinerea** (de Candolle) Loret & Barrandon. Burstwort
OP: *RSF 03-245*.
Loeflingia squarrosa Nuttall [*L. squarrosa* subsp. *cactorum* Barneby & Twisselmann]. Spreading Pygmy-leaf
CP: *SR 2003-375*. **OP**: *RSF 03-184*. **TA**: *RSF 92-608*.
Silene antirrhina Linnaeus. Sleepy Catchfly
CP: *RSF 93-363*. **OP**: *SR 2003-445* (ORPI).

CLEOMACEAE – CLEOME FAMILY
Polanisia dodecandra (Linnaeus) de Candolle subsp. **trachysperma** (Torrey & A. Gray) H. H. Iltis [*P. trachysperma* Torrey & A. Gray]. Western Clammyweed
OP: *SR 23 Nov 1994* (ORPI).
Wislizenia refracta Engelmann subsp. **refracta**. Jackass-clover
CP: Corner Well (Simmons 1966). **OP**: *Peebles 14558*.

CONVOLVULACEAE – MORNING GLORY FAMILY
Cuscuta, see Costea (2007) and Costea and Stefanović (2010).
Cuscuta californica Hooker & Arnott var. **californica**. Chaparral Dodder, California Dodder; *fideo*; vepegĭ vasai
OP: *McDougall 97*.
Cuscuta legitima Costea & Stefanović [*C. umbellata* var. *reflexa* (J. M. Coulter) Yuncker]
CP: *RSF 92-740*.
Cuscuta salina Engelmann. Salt Dodder; *fideo*; vepegĭ vasai
OP: *RSF 89-241*.

Cuscuta tuberculata Brandegee. Desert Dodder; *fideo*; vepegĭ vasai
OP: *RSF 10532.*
Cuscuta umbellata Kunth var. **umbellata**. Dodder; *fideo*; vepegĭ vasai
CP: RSF 92-687-B. **OP**: *RSF 88-414.*
Evolvulus alsinoides (Linnaeus) Linnaeus [*E. alsinoides* var. *acapulcensis* (Willdenow) van Ooststroom. *E. alsinoides* var. *angustifolia* Torrey]. Mouse Ears; *oreja de ratón*
OP: *Nichol 26 Mar 1938.*
Ipomoea costellata Torrey. Crest-rib Morning-glory
OP: *SR 20031026-17* (ORPI).
Ipomoea cristulata Hallier f. [*I. coccinea* of authors, not Linnaeus. *Quamoclit gracilis* Hallier f.]. Scarlet Morning-glory
OP: *Wirt 13 Oct 1990.*
Ipomoea hederacea Jacquin. Ivy-leaf Morning-glory
CP: *RSF 92-746.* **OP**: *Wilson 189.*
Jacquemontia pringlei A. Gray
OP: *Goodding 227.*

CRASSULACEAE – STONECROP FAMILY
Crassula connata (Ruiz & Pavón) A. Berger [*C. connata* var. *eremica* (Jepson) M. Bywater & Wickens. *Tillaea erecta* Hooker & Arnott]. Pygmy Stonecrop
CP: *RSF 93-162.* **OP**: *RSF 03-356.* **TA**: *RSF 05-26.*
Dudleya arizonica Rose [*D. pulverulenta* (Nuttall) Britton & Rose subsp. *arizonica* (Rose) Moran. *Echeveria arizonica* (Rose) Kearney & Peebles]. Arizona Liveforever
CP: *Simmons 27 Oct 1962.* **OP**: *Bowers 1268* (ORPI). **TA**: *Kurtz 1170.*
Graptopetalum rusbyi (Greene) Rose
OP: *Darrow 3863.*

CROSSOSOMATACEAE – CROSSOSOMA FAMILY
Crossosoma bigelovii S. Watson. Ragged Rock-flower
CP: *RSF 93-86.* **OP**: *Parker 7961.* **TA**: *Webster 24254.*

CUCURBITACEAE – GOURD FAMILY
Brandegea bigelovii (S. Watson) Cogniaux. Desert Star-vine
CP: *Nichol 13 Nov 1937.* **OP**: *Benson 9932.* **TA**: *Goodding 2092.*
Cucurbita digitata A. Gray. Finger-leaf Gourd, Coyote Gourd; *calabacilla, chichi coyota*; 'adavĭ, 'ad
CP: *RSF 92-671.* **OP**: *Simmons 1 Oct 1963.* **TA**: *Goodding 2090.*
Cucurbita palmata S. Watson. Desert Coyote Gourd
TA: *RSF 01-584.*
Echinopepon wrightii (A. Gray) S. Watson. Wild Balsam-apple
OP: *Wirt 13 Oct 1990.*
Marah gilensis (Greene) Greene. Big Root
OP: *Harbison 26258.*
Tumamoca macdougalii Rose. Tumamoc Globe-berry
OP: *Baker 7638* (ASU).

EUPHORBIACEAE – SPURGE FAMILY
Acalypha californica Bentham [*A. pringlei* S. Watson]. California Copperleaf; *hierba del cáncer*
CP: *RSF 92-649 & Turner.* **OP**: *Van Devender 84-450.* **TA**: *Goodding 5 Dec 1935.*
Chamaesyce, see **Euphorbia**
Croton sonorae Torrey. Sonora Croton; *rama blanca*
CP: *RSF 92-566.* **OP**, *Bowers 944.*
Croton wigginsii L. C. Wheeler. Dune Croton
CP: *RSF 93-386.*
Ditaxis adenophora (A. Gray) Pax & K. Hoffmann [*Argythamnia adenophora* A. Gray]. Glandular Silverbush
OP: *Van Devender 85-107.*

Ditaxis brandegeei (Millspaugh) Rose & Standley var. **intonsa** I.M. Johnston [*Argythamnia brandegeei* Millspaugh var. *intonsa* (I. M. Johnston) J. W. Ingram]. Sonoran Silverbush
CP: *Goodding 4358.*

Ditaxis lanceolata (Bentham) Pax & K. Hoffmann [*Argythamnia lanceolata* (Bentham) Müller Argoviensis]. Narrowleaf Silverbush
CP: *Whipple 3935.* **OP**: *RSF 88-458.* **TA**: *RSF 04-72.*

Ditaxis neomexicana (Müller Argoviensis) A. Heller [*Argythamnia neomexicana* Müller Argoviensis]. New Mexico Silverbush
CP: *RSF 92-661.* **OP**: *RSF 86-291.* **TA**: *RSF 04-10.*

Ditaxis serrata (Torrey) A. Heller var. **serrata**. [*Argythamnia serrata* (Torrey) Müller Argoviensis]. Sand Silverbush. See Steinmann and Felger (1997).
CP: *RSF 92-783.* **TA**: Frontera Canyon, 18 Mar 1998, *RSF*, observation.

Euphorbia. For placement of *Chamaesyce* in *Euphorbia*, see Steinmann and Porter (2002).

Euphorbia abramsiana L. C. Wheeler [*Chamaesyce abramsiana* (L. C. Wheeler) Koutnik]. Desert Sandmat, Abrams' Spurge; *golondrina*
CP: *RSF 01-577.* **OP**: *RSF 86-277.* **TA**: *RSF 04-44.*

Euphorbia albomarginata Torrey & A. Gray [*Chamaesyce albomarginata* (Torrey & A. Gray) Small]. Rattlesnake Weed; *golondrina*
CP: *RSF 92-562.* **OP**: *Bowers 893.*

Euphorbia arizonica Engelmann [*Chamaesyce arizonica* (Engelmann) Arthur]. Arizona Spurge; *golondrina*
OP: *McLaughlin 1934.*

Euphorbia capitellata Engelmann [*Chamaesyce capitellata* (Engelmann) Millspaugh]
OP: *McDougal 14 Apr 1941.*

Euphorbia eriantha Bentham. Beetle Spurge
CP: *RSF 93-424.* **OP**: *Benson 9928.* **TA**: *RSF 04-12.*

Euphorbia florida Engelmann [*Chamaesyce florida* (Engelmann) Millspaugh]
CP: *RSF 92-660* (CAB). **OP**: *Baker 7884* (ASU).

Euphorbia heterophylla Linnaeus
OP: *SR 20031026-40.*

Euphorbia hyssopifolia Linnaeus [*Chamaesyce hyssopifolia* (Linnaeus) Small]. Hyssop Spurge
CP: *Harlan 309.* **OP**: *Wirt 27 Jul 1990.*

Euphorbia melanadenia Torrey [*Chamaesyce melanadenia* (Torrey) Millspaugh]. *Golondrina*
OP: *Bezy 25 Oct 1964.*

Euphorbia micromera Boissier ex Engelmann [*Chamaesyce micromera* (Boissier ex Engelmann) Wooton & Standley]. *Golondrina*
CP: *Harlan 300.* **OP**: *RSF 86-294.*

Euphorbia pediculifera Engelmann var. **pediculifera** [*Chamaesyce pediculifera* (Engelmann) Rose & Standley var. *pediculifera*]. Louse Spurge; *golondrina*
CP: *McLaughlin 1959.* **OP**: *Mearns 2746* (US).

Euphorbia platysperma Engelmann ex S. Watson [*Chamaesyce platysperma* (Engelmann ex S. Watson) Shinners]. Dune Spurge. Flat-seed Spurge
TA: *Douglas 876* (ASU).

Euphorbia polycarpa Bentham [*Chamaesyce polycarpa* (Bentham) Millspaugh. *E. polycarpa* var. *hirtella* Boissier]. Desert Spurge; *golondrina*; vi'ibam
CP: *Shreve 6214.* **OP**: *Parker 7934.* **TA**: *RSF 04-13.*

***Euphorbia prostrata** Aiton [*Chamaesyce prostrata* (Aiton) Small]
OP: *Wirt 20 Jul 1990* (ORPI).

Euphorbia setiloba Engelmann ex Torrey [*Chamaesyce setiloba* (Engelmann ex Torrey) Millspaugh ex Parish]. Fringed Spurge; *golondrina*

Tropicos and others recognize *Chamaesyce setiloba* Norton, Contributions from the United States National Herbarium 25: 345 (1925). However, Kelly Allred (personal communication 23 December 2011) provided the following opinion: Parish (1925, Cat. Pl. Salton Sink 6, 1913, reprint of Carnegie Institution Washington Publication 193, 1914) reported, "*Chamaesyce setiloba* Millsp. ined. *Euphorbia setiloba* Engelm. In sandy or loose soil in which it is often partly buried. Mounds at

the old beach line east of Holtville (8087). Sand wash in the desert southwest of Brawley (8301)." The confusing part of this is the "ined." after Millspaugh, leading one to believe that Parish did not intend to effect the combination. It would seem to mean, rather, that the combination had not hitherto been published (Millspaugh proposed it, but it was ined.) and that Parish was deliberately bringing together the genus and the basionym as suggested by Millspaugh. Hence Millspaugh ex Parish is the correct citation, being sufficient to make the combination effectively published.

CP: *RSF 92-535*. **OP**: *Lehto L18317* (ASU). **TA**: *RSF 04-14*.

Euphorbia spathulata Lamarck. Warty Spurge

CP: *RSF 01-569*.

Euphorbia trachysperma Engelmann [*Chamaesyce trachysperma* (Engelmann) Millspaugh]

CP: *RSF 01-568*.

Jatropha cardiophylla (Torrey) Müller Argoviensis. Limberbush; *sangrengado*

OP: *Bowers 1393*.

Jatropha cinerea (Ortega) Müller Argoviensis. Ashy Limberbush; *sangrengado*; komagĭ va:s

OP: *Bowers 1392*.

Jatropha cuneata Wiggins & Rollins. Desert Limberbush; *sangrengado*; va:s

CP: *Peebles 10862*. **OP**: *Parker 7965*. **TA**: *Harrison 6567*.

Sebastiania bilocularis S. Watson [*Sapium biloculare* (S. Watson) Pax]. Arizona Jumping Bean; *hierba de la flecha*; 'ina hita

CP: *RSF 94-31*. **OP**: *Mearns 2753* (US).

Stillingia linearifolia S. Watson

CP: *SR 18 Feb 2002*. **OP**: *Baker 8787A* (ORPI).

Tragia nepetifolia Cavanilles. Noseburn; *ortiga*

OP: *Van Devender 84-453*.

FABACEAE (LEGUMINOSAE) – LEGUME FAMILY

Acacia, see **Acaciella**, **Senegalia**, and **Vachellia**

Acaciella angustissima (Miller) Britton & Rose [*Acacia angustissima* (Miller) Kuntze]. White-ball Acacia

OP: *Parker 7741*.

Acmispon, see Brouillet (2008) and Jepson Flora Project (2012).

Acmispon brachycarpus (Bentham) D. D. Sokoloff [*Lotus humistratus* Greene]. Hill Locust

OP: *McDougall 14*.

Acmispon maritimus (Nuttall) D. D. Sokoloff var. **brevivexillus** (Ottley) Brouillet [*Lotus salsuginosus* Greene var. *brevivexillus* Ottley. *L. humilis* Greene]. Bird-foot Trefoil

CP: *Peebles 10863*. **OP**: *Bowers 1105*.

Acmispon rigidus (Bentham) Brouillet [*Lotus rigidus* (Bentham) Greene]. Desert Rock-pea

CP: *Shreve 6228*. **OP**: *Van Devender 76-1*. **TA**: *Harrison 3610*.

Acmispon strigosus (Nuttall) Brouillet [*Lotus strigosus* (Nuttall) Greene var. *tomentellus* (Greene) Isely. *L. tomentellus* Greene]. Hairy Lotus

CP: *Shreve 5923*. **OP**: *Parker 7939*. **TA**: *TRV 9 Mar 1980*.

Astragalus didymocarpus Hooker & Arnott var. **dispermus** (A. Gray) Jepson. Dwarf White Milkvetch

OP: *RSF 03-260*.

Astragalus insularis Kellogg var. **harwoodii** Munz & McBurney. Sand Locoweed

CP: *Eiber 33*.

Astragalus lentiginosus Douglas ex Hooker. Freckled Milkvetch

Astragalus lentiginosus var. **australis** Barneby

OP: *Walden 19 Apr 1964* (ASU).

Astragalus lentiginosus var. **yuccanus** M. E. Jones

OP: *Tinkham 18 Apr 1942*.

Astragalus nuttallianus de Candolle var. **imperfectus** (Rydberg) Barneby. Small-flowered Milkvetch

CP: *RSF 93-270*. **OP**: *Nichol 24 Feb 1939*.

Calliandra eriophylla Bentham var. **eriophylla**. Fairy Duster; *huajillo*

CP: *RSF 93-48*. **OP**: *Bowers 1048*.

Coursetia glandulosa A. Gray [*C. microphylla* A. Gray]. *Sámota*
OP: *Parker 7919.*
Dalea mollis Bentham. Silky Dalea
CP: *Goodding 1701.* **OP**: *Harbison 26218.* **TA**: *RSF 05-67.*
Dalea pogonathera A. Gray var. **pogonathera**. Bearded Prairie-clover
OP: *Parker 7922.*
Dalea pringlei A. Gray var. **pringlei**. Pringle's Prairie-clover
OP: *Nichol 16 May 1937.*
Desmodium procumbens (Miller) Hitchcock [*D. procumbens* var. *exiguum* (A. Gray) B. G. Schubert. *D. procumbens* var. *transversum* (B. L. Robinson & Greenman) B. G. Schubert. *D. wigginsii* B. G. Schubert]. Western Tickfoil
OP: *SR 20060916-2.*
Galactia wrightii A. Gray. Wright's Milkpea
OP: *Bowers 1543.*
Hoffmannseggia glauca (Ortega) Eifort [*Caesalpinia glauca* (Ortega) Kuntze]. Hog Potato; *camote de ratón*; 'i:kovi
CP: *RSF 01-556.*
Lupinus arizonicus (S. Watson) S. Watson [*L. arizonicus* subsp. *sonorensis* J. A. Christian & D. B. Dunn]. Arizona Lupine; *lupino*; tas ha:hag
CP: *Peebles 10891.* **OP**: *RSF 88-284.* **TA**: *TRV 25 Mar 1983.*
Lupinus concinnus J. Agardh. Elegant Lupine
CP: *RSF 93-349.* **OP**: *Bowers 1601.*
Lupinus sparsiflorus Bentham [*L. sparsiflorus* subsp. *mohavensis* Dziekanowski & D. B. Dunn. *L. sparsiflorus* var. *mohavensis* (Dziekanowski & D. B. Dunn) Welsh]. Coulter's Lupine
CP: *RSF 93-327.* **OP**: *Bowers 1096.*
Marina parryi (Torrey & A. Gray) Barneby [*Dalea parryi* Torrey & A. Gray]. Parry Dalea, Parry's False Prairie-clover
CP: *Elias 10219.* **OP**: *Bowers 986.*
****Medicago polymorpha** Linnaeus [*M. hispida* Gaertner]. Burclover
OP: *RSF 88-142B* (ORPI).
***Melilotus indicus** (Linnaeus) Allioni. Yellow Sourclover; *trébol agrio*
OP: *Bowers 1607.*
Mimosa distachya Cavanilles var. **laxiflora** (Bentham) Barneby [*M. laxiflora* Bentham]. Arizona Mimosa; *garabatillo*
OP: *Bowers 1517.*
Nissolia schottii (Torrey) A. Gray. Schott's Yellowhood
OP: *Bowers 939.*
Olneya tesota A. Gray. Ironwood; *palo fierro*; ho'idkam
CP: Little Tule Well, 12 Jun 1992, *RSF*, observation. **OP:** *Cooper 577.* **TA**: *RSF 08-171.*
Parkinsonia, see Felger et al. (2001), Haston et al. (2005), Hawkins (1996), and Hawkins et al. (1999).
****Parkinsonia aculeata** Linnaeus. Mexican Palo Verde; *bagote, retama, guacapora*
OP: *SR 2003-524.*
Parkinsonia florida (Bentham ex A. Gray) S. Watson [*Cercidium floridum* Bentham ex A. Gray]. Blue Palo Verde; *palo verde*; ko'okomadk, kalisp
CP: *RSF 93-415.* **OP**: *Nichol 26 Apr 1939.* **TA**: *Van Devender 86-11.*
Parkinsonia microphylla Torrey [*Cercidium microphyllum* (Torrey) Rose & I. M. Johnston]. Foothill Palo Verde; *palo verde*; kek cehedagĭ
CP: Agua Dulce Mts, 12 Jun 1992, *RSF*, observations. **OP**: *RSF 90-404.* **TA**: *RSF 08-177.*
Phaseolus acutifolius A. Gray var. **acutifolius**. Tepary; *tépari del monte*; bavĭ
OP: *Wirt 13 Oct 1990.*
Phaseolus filiformis A. Gray [*P. wrightii* A. Gray]. Desert Bean; ban bavĭ, cepuliñ bavĭ
CP: *RSF 92-780.* **OP**: *Peebles 14554A.*
Prosopis glandulosa Torrey var. **torreyana** (L. D. Benson) M. C. Johnston [*P. juliflora* (Swartz) de Candolle var. *torreyana* L. D. Benson]. Western Honey Mesquite; *mezquite*; kui
CP: *Harlan 213* (CAB). **TA**: *Harrison 6581.*

Prosopis pubescens Bentham. Screw Bean; *tornillo*; kujel
OP: *RSF 86-327.*
Prosopis velutina Wooton [*P. juliflora* (Swartz) de Candolle var. *velutina* (Wooton) Sargent]. Velvet Mesquite; *mezquite*; kui
CP: *Lehto 22487* (ASU). **OP**: *RSF 87-270.*
Psorothamnus emoryi (A. Gray) Rydberg var. **emoryi** [*Dalea emoryi* A. Gray]. Emory's Smokebush
CP: *RSF 92-757.*
Psorothamnus fremontii (Torrey ex A. Gray) Barneby [*Dalea fremontii* Torrey ex A. Gray]. Fremont's Dalea
TA: *Sundt 2 Apr 2011.*
Psorothamnus spinosus (A. Gray) Barneby [*Dalea spinosa* A. Gray]. Smoke Tree; *palo cenizo*
CP: *SR 17 Feb 2002.* **OP**: *Nichol 3 Mar 1939.*
Rhynchosia texana Torrey & A. Gray [*R. senna Gillies* ex Hooker var. *texana* (Torrey & A. Gray) M. C. Johnston. *R. senna* var. *angustifolia* (A. Gray) Grear]. Texas Snout-bean. See Turner (2011).
OP: *Baker 7552* (ORPI).
Senegalia greggii (A. Gray) Britton & Rose [*Acacia greggii* A. Gray; *A. greggii* var. *arizonica* Isely]. Catclaw; *uña de gato, gatuño*; 'u:pad. See Seigler et al. (2006)
CP: *RSF 92-537* (CAB). **OP**: *Cooper 564.* **TA**: *RSF 04-21.*
Senna covesii (A. Gray) H. S. Irwin & Barneby [*Cassia covesii* A. Gray]. Desert Senna; *hojasén, daisillo*; ko'ovĭ ta:tamĭ
CP: *RSF 92-764.* **OP**: *Bowers 885.*
Tephrosia vicioides Schlechtendal [*T. tenella* A. Gray]. Red Hoary-pea
OP: *SR 5 Sep 1999.*
Trifolium wormskioldii Lehmann [*T. wormskioldii* var. *arizonicum* (Greene) Barneby. *T. lacerum* Greene. *T. willdenovii* Sprengel]. Cow Clover
OP: *Bowers 1205* (ORPI).
Vachellia constricta (Bentham) Seigler & Ebinger [*Acacia constricta* Bentham]. White-thorn Acacia; *mezquitillo*; gidag. See Seigler and Ebinger (2005).
CP: *RSF 94-23.* **OP**: *Bowers 928.*
Vicia ludoviciana Nuttall ex Torrey & A. Gray subsp. **ludoviciana** [*V. exigua* Nuttall]. Deerpea Vetch
OP: *Cooper 578.*

FAGACEAE – BEECH FAMILY
Quercus turbinella Greene [*Q. ajoensis* C. H. Muller. *Q. turbinella* subsp. *ajoensis* (C. H. Muller) Felger & C. H. Lowe]. Scrub Oak; *encinillo*
OP: *Muller 9519 & Tucker* (isotypes of *Q. ajoensis*, ARIZ, ORPI).

FOUQUIERIACEAE – OCOTILLO FAMILY
Fouquieria splendens Engelmann subsp. **splendens**. Ocotillo; *ocotillo*; melhog
CP: Agua Dulce Mt, 12 Jun 1992, *RSF*, observations. **OP**: *RSF 88-132.* **TA**: *RSF 04-15.*

GENTIANACEAE – GENTIAN FAMILY
Eustoma exaltatum (Linnaeus) Salisbury ex G. Don subsp. **exaltatum**. Catchfly Gentian
OP: *Mearns* 7 Feb 1894 (US).
Zeltnera arizonica (A. Gray) G. Mansion [*Centaurium arizonicum* (A. Gray) A. Heller. *C. calycosum* (Buckley) Fernald var. *arizonicum* (A. Gray) Tidestrom]. Arizona Centaury
OP: *RSF 86-212.*

GERANIACEAE – GERANIUM FAMILY
***Erodium cicutarium** (Linnaeus) L'Héritier ex Aiton. Filaree, Heron's Bill, Redstem Stork's Bill; *alfilerillo*; hoho'ibad
CP: *Whipple 3917.* **OP**: *RSF 88-279.* **TA**: *RSF 05-143.*
Erodium texanum A. Gray. Texas Filaree, Desert Stork's Bill
CP: *RSF 93-398.* **OP**: *RSF 03-335.* **TA**: *RSF 05-34.*

Geranium carolinianum Linnaeus. Crane's Bill
OP: *Bowers 1711.*

GROSSULARIACEAE – GOOSEBERRY FAMILY
Ribes quercetorum Greene. Oak Gooseberry
OP: *SR 20061022-5.*

KRAMERIACEAE – RATANY FAMILY
Krameria bicolor S. Watson, 1886 [*K. grayi* Rose & Painter, 1906]. White Rhatany; *cósahui*
CP: *Johnson 26 Mar 1960.* **OP**: *Bowers 1386.* **TA**: *RSF 04-16.*
Krameria erecta Willdenow ex Schultes [*K. parvifolia* Bentham]. Little-leaf Rhatany, Range Rhatany; *cósahui*
CP: *RSF 92-766.* **OP**: *Crooks 31 Mar 1937.* **TA**: *RSF 08-191.*

LAMIACEAE (LABIATAE) – MINT FAMILY
Hedeoma nana (Torrey) Briquet subsp. **macrocalyx** W. S. Stewart. False Pennyroyal; *orégano*
CP: *RSF 94-11.* **OP**: *Kearney 10852.*
Hyptis albida Kunth [*H. emoryi* Torrey]. Desert Lavender; *salvia.* See Felger et al. (2007) and Fishbein and Harlan (1998).
CP: *93-440.* **OP**: *McDougall 61.* **TA**: *Kurtz 1161.*
Monardella arizonica Epling. Arizona Monardella
OP: *Baker 7640* (ORPI).
Salvia columbariae Bentham. Desert Chia; *chía*; da:pk
CP: Simmons (1966). **OP**: *RSF 88-281.*
Salvia pinguifolia (Fernald) Wooton & Standley. Rock Sage
OP: *Darrow 3850.*
Salvia vaseyi (Porter) Parish [*Audibertia vaseyi* Porter]. Scallop-leaf Sage
CP: *Cain & Jansen 15 Nov 2003.*
Scutellaria mexicana (Torrey) A.J. Paton [*Salazaria mexicana* Torrey]. Bladder-Sage. See Patton (1990).
CP: *RSF 92-51.* **OP**: *Wilson 9 Apr 1993* (ORPI). **TA**: *Gentry 3524.*
Teucrium cubense Jacquin subsp. **depressum** (Small) E. M. McClintock & Epling. Dwarf Germander
CP: *RSF 93-99.* **OP**: *Wirt 12 Apr 1989.*
Teucrium glandulosum Kellogg. Desert Germander
CP: *Simmons 26 Oct 1962.* **OP**: *SR Mar 31 2005.* **TA**: *RSF 02-14.*

LINACEAE – FLAX FAMILY
Linum lewisii Pursh [*L.* perenne L. var. *lewisii* (Pursh) Eaton & Wright]. Prairie Flax
OP: *McDougall 9 Apr 1941.*

LOASACEAE – STICKLEAF FAMILY
Eucnide rupestris (Baillon) H. J. Thompson & W. R. Ernst [*Sympetaleia rupestris* (Baillon) A. Gray ex S. Watson]. Rock-nettle, Velcro Plant
CP: *Monson 1.* **OP**: *Wirt 5 Dec 1990.*
Mentzelia affinis Greene. Triangle-seed Blazing Star; *pegapega*
CP: *McLaughlin 2976.* **OP**: *RSF 88-287.*
Mentzelia albicaulis (Douglas ex Hooker) Douglas ex Torrey & A. Gray (this species complex includes **M. desertorum** (Davidson) H. J. Thompson & J. E. Roberts). White-stem Blazing Star
CP: *McLaughlin 2986.* **TA**: *TRV 6 Mar 1983.*
Mentzelia involucrata S. Watson [*M. involucrata* var. *megalantha* I. M. Johnston]. Silver Blazing Star; *pegapega*
CP: *Kearney & Peebles 11012.* **OP**: *Parker 7970.*
Mentzelia isolata Gentry
OP: *Wirt 13 Aug 1990.*

Mentzelia longiloba J. Darlington var. **yavapaiensis** J. J. Schenk & L. Hufford. Blazing Star; *pegapega*. See Schenk and Hufford (2010).
CP: *Yatskievych 79-242*. **OP**: *Harbison 26217*. **TA**: Frontera Canyon, 18 Mar 1998, *RSF*, observation.
Mentzelia puberula J. Darlington. Argus Blazing Star
CP: *Cain 15 Nov 2003*. **TA**: *Reichenbacher 480*.
Petalonyx linearis Greene. Narrowleaf Sandpaper Plant
OP: *Bowers 1259*. **TA**: *Goodding 5335*.
Petalonyx thurberi A. Gray subsp. **thurberi**. Thurber Sandpaper Plant; hadsadkam
CP: *Simmons 19 May 1963* (CAB). **OP**: *Bowers 1723*.

LYTHRACEAE – LOOSESTRIFE FAMILY (includes Punicaceae)
****Punica granatum** Linnaeus. Pomegranate; *granada*; galna:yu
OP: *TRV 31 Aug 1978*.

MALPIGHIACEAE – MALPIGHIA FAMILY
Cottsia gracilis (A. Gray) W. R. Anderson & C. Davis [*Janusia gracilis* A. Gray]. *Fermina*. See Anderson and Davis (2007).
CP: *RSF 93-287*. **OP**: *RSF 88-125*.

MALVACEAE – MALLOW FAMILY (includes Sterculiaceae)
Abutilon abutiloides (Jacquin) Garke ex Britton & P. Wilson. *Pintapán*
OP: *Bowers 990*.
Abutilon incanum (Link) Sweet [*A. pringlei* Hochreutiner]. Pelotazo
CP: *RSF 92-728*. **OP**: *Parker 7906*.
Abutilon malacum S. Watson. Yellow Indian Mallow
CP: *RSF 93-8*. **OP**: *Wirt 11 Nov 1988*.
Abutilon palmeri A. Gray. Palmer's Indian Mallow
CP: *Lehto L23521* (ASU). **OP**: *Benson 9923*.
Anoda abutiloides A. Gray. Indian Anoda
OP: *SR 8 Nov 1995* (ORPI).
Anoda pentaschista A. Gray. Field Anoda
OP: *SR 24 Sep 2006*.
Ayenia filiformis S. Watson [*A. pusilla* of various authors, not *A. pusilla* Linnaeus]. Dwarf Ayenia
CP: *RSF 92-736*. **OP**: *Bowers 1020*.
Ayenia microphylla A. Gray. Shrub Ayenia
OP: *Fouts 441*.
Eremalche exilis (A. Gray) Greene. White Mallow
CP: *Reeves 6787* (ASU). **OP**: *McDougall 70*.
Herissantia crispa (Linnaeus) Brizicky. Bladder Mallow
CP: *RSF 92-770*. **OP**: *Parker 7949*.
Hermannia pauciflora S. Watson. Dwarf Burstwort
OP: *Fallon 30 Mar 2011*.
Hibiscus biseptus S. Watson. Arizona Rose-mallow
OP: *Baker 7557* (ASU, mixed collection with *H. coulteri*).
Hibiscus coulteri Harvey ex A. Gray. Desert Rose-mallow
CP: *RSF 93-286*. **OP**: *Harbison 26248*.
Hibiscus denudatus Bentham var. **denudatus**. Rock Hibiscus
CP: *Shreve 5924*. **OP**: *McDougall 59*. **TA**: *Reeves R5431* (ASU).
Horsfordia alata (S. Watson) A. Gray. Pink Velvet-mallow
CP: *Shreve 5932*. **OP**: *Bowers 1526*. **TA**: *Kurtz 1158*.
Horsfordia newberryi (S. Watson) A. Gray. Orange Velvet-mallow
CP: *RSF 92-571*. **OP**: *Darrow 2411*. **TA**: Borrego Canyon, 16 Jun 1992, *RSF*, observation.
***Malva parviflora** Linnaeus. Cheeseweed; *malva, quesitos*; tas ha:hag, ha:hag cu'igkam
OP: *Bowers 1563*.

Malvastrum bicuspidatum (S. Watson) Rose subsp. **bicuspidatum**. Shrubby False Mallow
OP: *RSF 90-553.*
Malvella leprosa (Ortega) Krapovickas [*Sida leprosa* (Ortega) K. Schumann]. Alkali Mallow
CP: *RSF 01-563 .*
Malvella sagittifolia (A. Gray) Fryxell [*Sida lepidota* A. Gray var. *sagittifolia* A. Gray]. Arrow-leaf Alkali Mallow
CP: *Simmons 4 Oct 1964.*
Rhynchosida physocalyx (A. Gray) Fryxell [*Sida physocalyx* A. Gray]
OP: *Warren 10 Nov 1983.*
Sida abutifolia Miller [*Sida filicaulis* Torrey & A. Gray. *S. procumbens* Swartz]
OP: *RSF 03-423.*
Sphaeralcea ambigua A. Gray subsp. **ambigua**. Desert Globemallow; *mal de ojo*
CP: *Shreve 6223.* **OP**: *Bowers 1145.* **TA**: *RSF 04-78.*
Sphaeralcea coulteri (S. Watson) A. Gray [*S. orcuttii* Rose]. Annual Globemallow; *mal de ojo*; hadam tatk, ñiatum. See Felger (2000) and Felger et al (2007b).
CP: *Kearney 10900.* **OP**: *Parker 7943.* **TA**: *RSF 05-141.*
Sphaeralcea emoryi Torrey ex A. Gray. Emory Globemallow; *mal de ojo*
CP: *RSF 92-15.* **OP**: *Benson 9921.* **TA**: *RSF 10-167.*
Sphaeralcea laxa Wooton & Standley. Caliche Globemallow
OP: *Goodding 297-41.*

MARTYNIACEAE – DEVIL'S CLAW FAMILY
Proboscidea altheifolia (Bentham) Decaisne. Desert Devil's Claw, Desert Unicorn-plant; *cuernitos, uña de gato*; ban 'ihugga
CP: *RSF 92-767.* **OP**: *Gould 3217.* **TA**: *RSF 04-18.*
Proboscidea parviflora (Wooton) Wooton & Standley subsp. **parviflora**. Devil's Claw; *cuernitos, uña de gato*; 'ihug
OP: *Wirt 13 Aug 1990.*

MOLLUGINACEAE — CARPET-WEED FAMILY
***Glinus lotoides** Linnaeus
CP: *RSF 92-565.*
***Mollugo cerviana** (Linnaeus) Seringe. Thread-stem Carpet-weed, Indian Chickweed
CP: *RSF 92-715.* **OP**: *RSF 88-419.* **TA**: *RSF 04-50.*

MONTIACEAE — MINER'S LETTUCE FAMILY
Calandrinia ciliata (Ruiz & Pavón) de Candolle [*C. ciliata* var. *menziesii* (Hooker) J. F. Macbride]. Fringed Redmaids
OP: *RSF 03-264.*
Cistanthe monandra (Nuttall) Hershkovitz [*Calyptridium monandrum* Nuttall]. Sand-cress
OP: *Nichol 14 Mar 1939.*
Claytonia perfoliata Donn ex Willdenow subsp. **mexicana** (Rydberg) John M. Miller & K. L. Chambers [*Montia perfoliata* (Donn ex Willdenow) Howell. *M. mexicana* (Rydberg) Standley & Steyermark]. Miner's Lettuce
OP: *Nichol 14 Mar 1939.*
Phemeranthus aurantiacus (Engelmann) Kiger [*Talinum aurantiacum* Engelmann]. Orange Flame-flower
OP: *Bowers 1798.*

MORACEAE – MULBERRY FAMILY
****Ficus carica** Linnaeus. Fig; *higuera*; su:na
OP: *RSF 88-452* (extirpated).
Morus microphylla Buckley. Littleleaf Mulberry; *mora cimarrona*; gohi
OP: *Bowers 1291.*

NYCTAGINACEAE – FOUR-O'CLOCK FAMILY

Abronia villosa S. Watson var. **villosa**. Sand-verbena; *verbana de la arena*
CP: *Benson 10783*. **TA**: *TRV 27 Mar 1983*.

Acleisanthes longiflora A. Gray. Angel Trumpets
CP: *RSF 92-564*.

Allionia incarnata Linnaeus [*A. incarnata* var. *nudata* (Standley) Munz. *A. incarnata* var. *villosa* (Standley) Munz]. Windmills, Trailing Four-o'clock
CP: *RSF 92-678*. **OP**: *Nichol 14 Mar 1939*. **TA**: *RSF 04-23*.

***Boerhavia coccinea** Miller [*B. caribaea* Jacquin]. Scarlet Spiderling
CP: *RSF 92-637*. **OP**: *TRV 85-114*. **TA**: *RSF 92-609*.

Boerhavia coulteri (Hooker f.) S. Watson var. **palmeri** (S. Watson) Spellenberg [*B. spicata* Choisy var. *palmeri* S. Watson]. Spiderling; *juantilipín*
CP: *RSF 92-676*. **OP**: *Wirt 25 Jul 1990*. **TA**: *RSF 04-29*.

Boerhavia erecta Linnaeus. Spiderling; *juantilipín*; makkumĭ ha-jeved
CP: *RSF 92-692*. **OP**: *Gould 3214*. **TA**: *RSF 04-28*.

Boerhavia megaptera Standley. Large-winged Spiderling
OP: *Bowers 954*.

Boerhavia pterocarpa S. Watson. Wing-fruit Spiderling
OP: *Bowers 1533* (ORPI).

Boerhavia triquetra S. Watson [B. *intermedia* M. E. Jones. *B. triquetra* var. *intermedia* (M. E. Jones) Spellenberg. *B. maculata* Standley]. Spiderling; *juanamipili, juantilipín*. See Spellenberg (2007).
CP: *RSF 01-572*. **OP**: *Warren* 11 Aug 1975.

Boerhavia wrightii A. Gray. Large-bract Spiderling; *juantilipín*
CP: *RSF 92-677*. **OP**: *Bowers 1530*. **TA**: *RSF 04-08*.

Commicarpus scandens (Linnaeus) Standley. Climbing Wart-club
CP: E margin of Cabeza Prieta, 23 Feb 2003, *SR*, observation. **OP**: *RSF 91-136*.

Mirabilis laevis (Bentham) Curran var. **villosa** (Kellogg) Spellenberg [*M. bigelovii* A. Gray]. Desert Four O'clock
CP: *Shreve 5931*. **OP**: *Benson 10678*. **TA**: *Goodding 1517*.

Mirabilis multiflora (Torrey) A. Gray var. **multiflora**. Colorado Four O'clock
OP: *SR 20031026-43*.

Mirabilis tenuiloba S. Watson. Long-lobed Four O'clock
TA: *RSF 92-613*.

OLEACEAE – OLIVE FAMILY

Forestiera phillyreoides (Bentham) Torrey [*F. shrevei* Standley]. Desert Olive
OP: *Shreve 6201* (isotype of *F. shrevei*).

Fraxinus velutina Torrey. Velvet Ash; *fresno*
OP: *Benson 10686* (native? extirpated?).

Menodora scabra A. Gray [*M. scoparia* Engelmann ex A. Gray]. Twinberry
CP: *Harlan 392*. **OP**: *Darrow 2429*.

ONAGRACEAE – EVENING-PRIMROSE FAMILY

For revisions in Onagraceae see Wagner et al. (2007).

Chylismia arenaria A. Nelson [*Camissonia arenaria* (A. Nelson) P. H. Raven]. Fortuna Suncup
CP: TRV 9 Mar 1980. **TA**: *Harrison 3608*.

Chylismia claviformis (Torrey & Frémont) A. Heller subsp. **peeblesii** (Munz) W. L. Wagner & Hoch [*Camissonia claviformis* (Torrey & Frémont) P. H. Raven subsp. *peeblesii* (Munz) P. H. Raven]. Browneyes
CP: *Furlow 14 Mar 1979*. **OP**: *Bowers 1104*. **TA**: *TRV 5 Mar 1983*.

Chylismia claviformis subsp. **rubescens** (P. H. Raven) W. L. Wagner & Hoch [*Camissonia claviformis* subsp. *rubescens* (P. H. Raven) P. H. Raven]. Browneyes
CP: *Shreve 6211*. **OP**: *Bowers 1138*.

Epilobium canum (Greene) P. H. Raven subsp. **latifolium** (Hooker) P. H. Raven [*Zauschneria californica* C. Presl subsp. *latifolia* (Hooker) D. D. Keck]. California Fuchsia, Hummingbird Trumpet

OP: *Nichol 14 Mar 1939.*

Eremothera boothii (Douglas) W. L. Wagner & Hoch subsp. **condensata** (Munz) W. L. Wagner & Hoch [*Camissonia boothii* (Douglas) P. H. Raven subsp. *condensata* (Munz) P. H. Raven]. Woody Bottle-washer

CP: *Niles 356.* **OP**: *Bowers 1097.*

Eremothera chamaenerioides (A. Gray) W. L. Wagner & Hoch [*Camissonia chamaenerioides* (A. Gray) P.H. Raven]. Willow-herb Evening-primrose

CP: *RSF 93-121.* **OP**: *Bowers 1106.* **TA**: *TRV 5 Mar 1983.*

Eulobus californicus Nuttall ex Torrey & A. Gray [*Camissonia californica* (Nuttall ex Torrey & A. Gray) P.H. Raven. *Oenothera leptocarpa* Greene]. California Suncup

CP: *RSF 93-417.* **OP**: *McDougall 45.* **TA**: *TRV 5 Mar 1983.*

Oenothera arizonica (Munz) W. L. Wagner [*O. deltoides* Torrey & Frémont var. *arizonica* Munz. *O. californica* (S. Watson) S. Watson subsp. *arizonica* (Munz) W.M. Klein. *O. avita* (W. M. Klein) W. M. Klein subsp. *arizonica* (Munz) W. M Klein]. Arizona Evening-primrose

CP: *Shreve 6222.* **OP**: *Kearney 10856.*

Oenothera curtiflora W. L. Wagner & Hoch [*Gaura parviflora* Douglas ex Lehmann]. Lizard-tail, Velvet-leaf Gaura

CP: *Benson 10748.* **OP**: *RSF 86-174A.*

Oenothera deltoides Torrey & Frémont subsp. **deltoides**. Dune Evening-primrose, Devil's Lantern

CP: *RSF 92-37.*

Oenothera primiveris A. Gray. Yellow Desert Evening-primrose

CP: *Shreve 6222.* **OP**: *Nichol 24 Feb 1939.* **TA**: *RSF 04-54.*

OROBANCHACEAE – BROOMRAPE FAMILY

Castilleja exserta (A. Heller) T. I. Chuang & Heckard subsp. **exserta** [*Orthocarpus exsertus* A. Heller. *O. purpurascens* Bentham]. Purple Owl's-clover

CP: *Cutler 17 Mar 1995* (CAB). **OP**: *Benson 10656.*

Castilleja lanata A. Gray. Indian Paintbrush

OP: *Nichol 4 May 1939.*

Orobanche cooperi (A. Gray) A. Heller. Desert Broomrape; mo'otadk

CP: *SR 18 Feb 2002.* **OP**: *RSF 88-300.* **TA**: *TRV 6 Mar 1983.*

Orobanche fasciculata Nuttall. Yellow Broomrape

OP: *SR 2003-497* (ORPI).

OXALIDACEAE – OXALIS FAMILY

Oxalis albicans Kunth. Wood sorrel

OP: *Darrow 3854.*

PAPAVERACEAE – POPPY FAMILY

Argemone gracilenta Greene. Prickly Poppy, Cowboy's Fried Eggs; *cardo*

CP: *RSF 92-11.* **OP**: *Cooper 611.*

***Argemone ochroleuca** Sweet subsp. **ochroleuca.** Mexican Prickly Poppy; *cardo*

OP: *Johnson* 25 Apr 1992 (ASU).

Eschscholzia californica Chamisso subsp. **mexicana** (Greene) C. Clark. Mexican Gold-poppy; *amapolita del campo*; ho:hi 'e'es

OP: *Niles 556.*

Eschscholzia minutiflora S. Watson. Little Gold-poppy

CP: *SR 2003-381.* **OP**: *RSF 88-290.* **TA**: *TRV 5 Mar 1983.*

PHRYMACEAE – MONKEY-FLOWER FAMILY

Mimulus guttatus Fischer ex de Candolle. Seep Monkey-flower

OP: *Bowers 1206.*

Mimulus rubellus A. Gray. Little Monkey-flower
OP: *Shreve 6202.*

PHYTOLACCACEAE – POKEWEED FAMILY
Rivina humilis Linnaeus. Rouge Plant, Pigeon Berry
OP: *Goodding 294-41.*

PLANTAGINACEAE – PLANTAIN FAMILY (includes Scrophulariaceae, in part)
Antirrhinum. Vargus et al. (2004) recognize *Neogaerrhinum* and *Sairocarpus*; also see Oyama and Baum (2004). We are retaining *Antirrhinum* for these genera following the Jepson Flora Project (2012).
Antirrhinum filipes A. Gray [*Asarina filipes* (A. Gray) Pennell. *Neogaerrhinum filipes* (A. Gray) Rothmaler]. Yellow Twining Snapdragon
CP: *SR 2003-27.* **OP**: *McDougall 84.*
Antirrhinum nuttallianum Bentham subsp. **subsessile** (A. Gray) D. M. Thompson [*Sairocarpus pusillus* (Brandegee) D. A. Sutton]. Lesser Snapdragon
OP: *Thompson 264.*
Antirrhinum watsonii Vasey & Rose [*A. kingii* S. Watson var. *watsonii* (Vasey & Rose) Munz. *Sairocarpus watsonii* (Vasey & Rose) D. A. Sutton]. Watson's Snapdragon
OP: *Baker 7707* (ASU, ORPI).
Keckiella antirrhinoides (Bentham) Straw subsp. **microphylla** (A. Gray) Straw [*Penstemon microphyllus* A. Gray]. Bush Penstemon
OP: *Bowers 1281.*
Maurandya antirrhiniflora Humboldt & Bonpland ex Willdenow [*Asarina antirrhiniflora* (Humboldt & Bonpland ex Willdenow) Pennell. *Maurandella antirrhiniflora* (Humboldt & Bonpland ex Willdenow) Rothmaler]. Blue Snapdragon-vine, Blue Twining Snapdragon
CP: *RSF 92-544.* **OP**: *Bowers 933.*
Nuttallanthus texanus (Scheele) D.A. Sutton [*Linaria texana* Scheele. *L. canadensis* (Linnaeus) Dumont de Courset var. *texana* (Scheele) Pennell]. Blue Toadflax, Texas Toadflax
OP: *TRV 10 Mar 1978.*
Penstemon parryi (A. Gray) A. Gray. Desert Penstemon; *jaritos, varita de San José*; hevel 'e'es
CP: Childs Mt, rare, Mar 2004, *Curtis McCasland*, observation. **OP**: *Gould 3006.* **TA**: Tinajas Altas, rare, 10 Jan 2002, *RSF*, observation.
Penstemon pseudospectabilis M. E. Jones subsp. **pseudospectabilis**. Mojave Beard-tongue
CP: *RSF 93-160.* **OP**: *Lockwood 161.* **TA**: *Hodgson 2723* (DES).
Plantago ovata Forsskål var. **fastigiata** (E. Morris) S. C. Meyers & Liston [*P. insularis* Eastwood. Not *P. insularis* Nyman ex Briquet. *P. fastigiata* E. Morris. *P. insularis* var. *fastigiata* (E. Morris) Jepson]. Woolly Plantain, Indian Wheat; *pastora*; mumsa
CP: *RSF 93-320.* **OP**: *Parker 7908.* **TA**: *RSF 05-123.*
Plantago patagonica Jacquin [*P. purshii* Roemer & Schultes]. *Pastora*
CP: *RSF 92-560.* **OP**: *SR 2003-454.*
Pseudorontium cyathiferum (Bentham) Rothmaler [*Antirrhinum cyathiferum* Bentham]. Desert Snapdragon. See Oyama and Baum (2004) and Vargus et al. (2004).
CP: *Benson 10792.* **OP**: *Baker 7715* (ASU). **TA**: Frontera Canyon, 18 Mar 1998, *RSF*, observation.
Stemodia durantifolia (Linnaeus) Swartz. Purple Stemodia
OP: *Dakan 27 Feb 1972* (ORPI). *Van Devender 87-5.*
Veronica peregrina Linnaeus subsp. **xalapensis** (Kunth) Pennell. Purslane Speedwell, Necklace-weed
CP: *RSF 92-563.* **OP**: *Gould 2987.*

PLUMBAGINACEAE – LEADWORT FAMILY
Plumbago zeylanica Linnaeus [*P. scandens* Linnaeus]. Doctor-bush; *estrenina*
OP: *Parker 7744.*

POLEMONIACEAE – PHLOX FAMILY

Aliciella latifolia (S. Watson) J. M. Porter subsp. **latifolia** [*Gilia latifolia* S. Watson]. Broad-leaf Gilia
CP: *Benson 10795*. **TA**: *Halse 31 Mar 1973*.

Eriastrum diffusum (A. Gray) H. Mason. Woolly-star
CP: *Kearney 10870*. **OP**: *RSF 88-293*. **TA**: *TRV 6 Mar 1983*.

Eriastrum eremicum (Jepson) H. Mason subsp. **yageri** (M. E. Jones) H. Mason. Desert Woolly-star
OP: *Tinkham Apr 1942*.

Gilia flavocincta A. Nelson subsp. **australis** (A. D. & V. E. Grant) A. G. Day & V. E. Grant [*G. ophthalmoides* Brand subsp. *australis* (A. Nelson) A. D. & V. E. Grant]. Lesser Yellowthroat Gilia
OP: *McDougall 44*.

Gilia stellata A. Heller. Star Gilia
CP: *Monson* 20 Mar 1958. **OP**: *Kearney 10811*. **TA**: *McLaughlin 1972*.

Ipomopsis multiflora (Nuttall) V.E. Grant [*Gilia multiflora* Nuttall]. Many-flowered Gilia
OP: *Baker 7641* (ASU).

Langloisia setosissima (Torrey & A. Gray) Greene subsp. **setosissima**. Bristly Langloisia
CP: *SR 2003-34*. **OP**: *Bowers 1119*. **TA**: *RSF 98-102*.

Leptosiphon aureus (Nuttall) J. M. Porter & L. A. Johnson subsp. **aureus** [*Linanthus aureus* (Nuttall) Greene var. *aureus*]. Golden Desert-trumpets
OP: *McDougall 39*.

Linanthus bigelovii (A. Gray) Greene. Bigelow's Desert-trumpet
CP: *RSF 92-39*.

Linanthus cf. **bigelovii** (large-flowered form with short simple leaves)
CP: *RSF 93-427*.

Linanthus cf. **bigelovii** × **L. jonesii** (possible hybrid)
CP: *Bowers 1228*. **OP**: *Whipple 3925*.

Linanthus demissus (A. Gray) Greene. Desert Snow
OP: *McDougall 68*.

Linanthus jonesii (A. Gray) Greene. Jones' Desert-trumpet
CP: *Benson 10762A* (RSA). **OP**: *Gould 2994*. **TA**: *TR 26 Mar 1983*.

Linanthus cf. **jonesii** (large-flowered form, perhaps an unnamed taxon)
CP: *Mason 3601*.

Loeseliastrum schottii (Torrey) Timbrook [*Langloisia schottii* (Torrey) Greene]. Schott's Calico
TA: *TRV 27 Mar 1983*.

Phlox tenuifolia E.E. Nelson. Mountain Phlox
OP: *Bowers 932*.

POLYGALACEAE – MILKWORT FAMILY

Polygala macradenia A. Gray. Gland-leaf Milkwort
OP: *Darrow 3857*.

POLYGONACEAE – BUCKWHEAT FAMILY

Chorizanthe brevicornu Torrey subsp. **brevicornu**. Brittle Spineflower, Short-horn Spineflower
CP: *Niles 344*. **OP**: *Benson 10675*. **TA**: *TRV 5 Mar 1983*.

Chorizanthe corrugata (Torrey) Torrey & A. Gray. Wrinkled Spineflower
CP: *RSF 93-394*. **OP**: *SR 6 Apr 1998* (ORPI).

Chorizanthe rigida (Torrey) Torrey & A. Gray. Devil's Spineflower; *tapacola*
CP: *RSF 92-1*. **OP**: *Parker 7923*. **TA**: *RSF 05-33*.

Eriogonum abertianum Torrey. Abert's Wild Buckwheat
OP: *Kearney 10833*.

Eriogonum deflexum Torrey var. **deflexum** [*E. deflexum* var. *turbinatum* (Small) Reveal]. Skeleton Weed
CP: *SR 22 Mar 2003*. **OP**: *Parker 7979*.

Eriogonum fasciculatum Bentham var. **polifolium** (Bentham) Torrey & A. Gray. Flat-top Buckwheat
CP: *RSF 92-52*. **OP**: *Parker 8009*. **TA**: *Shreve 5942*.

Eriogonum inflatum Torrey & Frémont. Desert Trumpet, Bladder Stem
CP: *RSF 93-339.* **OP**: *RSF 88-460.* **TA:** *Reeves 5441* (ASU).
Eriogonum maculatum A. Heller. Spotted Wild Buckwheat
OP: *Walden 18 Apr 1964* (ASU).
Eriogonum thomasii Torrey. Thomas' Wild Buckwheat
CP: *Shreve 6213.* **OP**: *Parker 7968.* **TA**: *TRV 5 Mar 1983.*
Eriogonum thurberi Torrey. Thurber's Wild Buckwheat
CP: *RSF 93-438.* **OP**: *Lehto 15443-f.* **TA**: *RSF 05-93.*
Eriogonum trichopes Torrey. Little Desert Trumpet
CP: *RSF 92-776.* **OP**: *Bowers 1253.* **TA**: *RSF 05-28.*
Eriogonum wrightii Torrey ex Bentham var. **nodosum** (Small) Reveal [*E. wrightii* var. *pringlei* (J. M. Coulter & Fisher) Reveal]. Bastard-sage
CP: *McLaughlin 1965.* **OP**: *RSF 90-562.* **TA**: *Goodding 1449.*
Nemacaulis denudata Nuttall var. **gracilis** Goodman & L. D. Benson. Woolly Heads
CP: *Eiber 27.* **TA**: *TRV 27 Mar 1983.*
***Polygonum argyrocoleon** Steudel ex Kunze. Silver-sheath Knotweed
CP: *RSF 92-562* (CAB). **OP**: *RSF 05-161.*
Pterostegia drymarioides Fischer & C. A. Meyer. Woodland Threadstem
OP: *Kearney 10815.*
Rumex hymenosepalus Torrey. Sand Dock, Wild-rhubarb; *cañaigre*; wakondam
OP: *McDougall 82.*

PORTULACACEAE – PURSLANE FAMILY (in part see **MONTIACEAE** and **TALINACEAE)**
Portulaca halimoides Linnaeus [*P. parvula* A. Gray]. Silk-cotton Purslane
CP: *Harlan 305.* **OP**: *RSF 87-281.* **TA**: *RSF 04-61.*
***Portulaca oleracea** Linnaeus. Purslane; *verdolaga*; ku'ukpalk
CP: *RSF 01-554.* **OP**: *RSF 87-318.*
Portulaca suffrutescens Engelmann
OP: *SR 20060924-5.*
Portulaca umbraticola Kunth subsp. **lanceolata** (Engelmann) J. F. Matthews & Ketron [*P. lanceolata* Engelmann]. Winged Purslane
OP: *Wilson 193.*

PRIMULACEAE – PRIMROSE FAMILY
****Anagallis arvensis** Linnaeus subsp. **arvensis**. Scarlet Pimpernel
OP: *RSF 88-138.*
Androsace occidentalis Pursh [*A. occidentalis* var. *arizonicus* (A. Gray) H. St. John]. Western Rock-jasmine
OP: *Kearney 10851.*

RANUNCULACEAE – RANUNCULUS FAMILY
Anemone tuberosa Rydberg. Desert Windflower
OP: *RSF 05-266.*
Clematis drummondii Torrey & A. Gray. Texas Virgin-bower; *barba de chivato*
CP: *RSF 92-722.* **OP**: *Harbison 25672.*
Delphinium scaposum Greene. Bare-stem Larkspur; *espulita cimarrona*
CP: *RSF 93-309.* **OP**: *Parker 7960.*
Myosurus cupulatus S. Watson. Mousetail
OP: *RSF 05-199.*
Myosurus minimus Linnaeus. Dwarf Mousetail
OP: *Gould 2986* (extirpated)

RESEDACEAE – MIGNONETTE FAMILY
Oligomeris linifolia (Vahl) J. F. Macbride. Desert Cambess
CP: *Benson 10776.* **OP**: *Nichol 28 Apr 1939.* **TA**: *RSF 04-53.*

RHAMNACEAE – BUCKTHORN FAMILY

Condalia globosa I.M. Johnston var. **pubescens** I.M. Johnston. Crucillo; kawk kuavulĭ
CP: *RSF 94-21*. **OP**: *Peebles 14329*.

Frangula betulifolia (Greene) Grubov subsp. **betulifolia** [*Rhamnus betulifolia* Greene]. Birchleaf Buckthorn; *salicieso*
OP: *Nichol, 23 Feb 1939*.

Rhamnus crocea Nuttall. Holly-leaf Buckthorn, Holly-leaf Redberry. (We are unable to distinguish *R. crocea* in Organ Pipe from *R. ilicifolia* Kellogg; Wolf (1938) considered them to be conspecific, e.g., *R. crocea* subsp. *ilicifolia* (Kellogg) C. B. Wolf.)
OP: *Parker 8001*.

Ziziphus obtusifolia (Hooker ex Torrey & A. Gray) A. Gray var. **canescens** (A. Gray) M. C. Johnston [*Condalia lycioides* (A. Gray) Weberbauer var. *canescens* (A. Gray) Trelease]. White Crucillo, Graythorn; *abrojo*
CP: *Harlan & Steinmann 283* (CAB). **OP**: *RSF 89-233*. **TA**: *RSF 08-170*.

ROSACEAE – ROSE FAMILY

Vauquelinia californica (Torrey) Sargent subsp. **sonorensis** W. J. Hess & Henrickson. Sonoran Rosewood
OP: *Nichol 23 Feb 1939*.

RUBIACEAE – MADDER FAMILY

Galium aparine Linnaeus. Stickywilly, Goose-grass Bedstraw
OP: *Kearney & Peebles 10845*.

Galium microphyllum A. Gray. Bract-leaf Bedstraw
OP: *RSF 03-415*.

Galium stellatum Kellogg [*G. stellatum* var. *eremicum* Hilend & J. T. Howell]. Starry Bedstraw
CP: *Shreve 5937*. **OP**: *Bowers 1251*. **TA**: *Harrison & Kearney 6574*.

RUTACEAE – RUE OR CITRUS FAMILY

Ptelea trifoliata Linnaeus. Hop Tree
OP: *Harbison 13 Dec 1939* (SD).

Thamnosma montana Torrey & Frémont. Turpentine-broom
CP: *Engard 914* (DES). **TA**: *Harrison & Belden 3612*.

SALICACEAE – WILLOW FAMILY

Populus fremontii S. Watson subsp. **fremontii**. Frémont Cottonwood; *álamo*; 'auppa
OP: *Peebles 14563*.

Salix gooddingii C. R. Ball. Goodding Willow; *sauce, sauz*; ce'ul
OP: *Peebles 14562*.

SANTALACEAE – SANDALWOOD FAMILY (includes Viscaceae)

Phoradendron californicum Nuttall. Desert Mistletoe; *toji*; ha:kvad
CP: *RSF 92-9*. **OP**: *Mearns 2742* (US). **TA**: *RSF 04-59*.

SAPINDACEAE – SOAPBERRY FAMILY

Dodonaea viscosa Jacquin var. **angustifolia** (Linnaeus f.) Bentham. Hop-bush; *tarachico*
OP: *Lockwood 159*.

Sapindus drummondii Hooker & Arnott [*S. saponaria* Linnaeus var. *drummondii* (Hooker & Arnott) L. D. Benson]. Soapberry; *jaboncillo, amolillo*
OP: *Bowers 1340*.

SAURURACEAE, see **MAGNOLIIDS**

SCROPHULARIACEAE, see **OROBANCHACEAE, PHRYMACEAE**, and **PLANTAGINACEAE**

SIMAROUBACEAE – QUASSIA FAMILY

Castela emoryi (A. Gray) Moran & Felger [*Holacantha emoryi* A. Gray]. Crucifixion-thorn; *corona de cristo*

CP: *RSF 92-545*. **OP**: *Gould 3012*.

SIMMONDSIACEAE – JOJOBA FAMILY

Simmondsia chinensis (Link) C. K. Schneider. Jojoba, Goat-nut; *jojoba*; hohovai

OP: *Tibbitts 6 Mar 2003*.

SOLANACEAE – NIGHTSHADE or POTATO FAMILY

Capsicum annuum Linnaeus var. **glabriusculum** (Dunal) Heiser & Pickersgill [*C. indicum* Dierbach var. *aviculare* Dierbach. *C. annuum* var. *aviculare* (Dierbach) D'Arcy & Eshbaugh]. Chiltepin; *chiltepín*; a'al ko'okol

OP: *Wilson 207*.

Chamaesaracha coronopus (Dunal) A. Gray. False Nightshade

CP: *Hardy* [*Hardies*] 3 Dec 1935. **TA**: *RSF 04-63*.

Datura discolor Bernhardi. Desert Datura; *toloache*

CP: *RSF 92-778*. **OP**: *Gould 3216*. **TA**: *RSF 04-64*.

Lycium andersonii A. Gray var. **andersonii** [*L. andersonii* var. *deserticola* (C. L. Hitchcock) Jepson]. Desert Wolfberry; *salicieso*; s-toa kuavulĭ

CP: *SR 2003-31*. **OP**: *RSF 90-47*. **TA**: *RSF 08-196*.

Lycium berlandieri Dunal var. **longistylum** C. L. Hitchcock. *Bachata, salicieso*

CP: *TRV 9 Mar 1980*. **OP**: *Bowers 908*.

Lycium brevipes Bentham var. **brevipes** [*L. richii* A. Gray]. *Salicieso*

OP: *SR 2003-107* (ORPI).

Lycium californicum Nuttall ex A. Gray var. **californicum** [*L. californicum* var. *arizonicum* A. Gray]. California Desert-thorn

CP: *SR 20050115-8* (specimen not located). **OP**: *RSF 90-42*.

Lycium exsertum A. Gray. Arizona Desert-thorn; *salicieso*

OP: *Bowers 1564*.

Lycium fremontii A. Gray var. **fremontii**. Frémont Wolfberry; *salicieso*; kuavulĭ

CP: *RSF 92-42*. **OP**: *Bowers 1011*. **TA**: *McLaughlin 1967*.

Lycium macrodon A. Gray. S-cuk kuavulĭ

CP: *RSF 93-168*. **OP**: *Mearns 2740* (CAS). **TA**: *Harrison 6571*.

Lycium parishii A. Gray. Parish Wolfberry; *salicieso*

CP: *Darrow* 14 Apr 1941. **OP**: *Shreve 6208*. **TA**: *TRV 9 Mar 1980*.

Nicotiana clevelandii A. Gray. Desert Tobacco; *tabaquillo del coyote*; ban vivga

CP: *Benson 10810*. **OP**: *Bowers 1044* (ORPI). **TA**: *Kearney 10913*.

****Nicotiana glauca** Graham var. **glauca**. Tree Tobacco

OP: Hwy 85, near Visitor Center, *5 Sep 2005, SR*, observation.

Nicotiana obtusifolia M. Martens & Galeotti [*N. trigonophylla* Dunal]. Coyote Tobacco, Desert Tobacco; *tobaco de coyote*; O'odham ha-vivga

CP: *Cain 15 Nov 2003*. **OP**: *Mearns 2744* (CAS/DS). **TA**: *Harrison 6568*.

Petunia parviflora de Jussieu [*Calibrachoa parviflora* (de Jussieu) D'Arcy]. Small-flowered Petunia

OP: *RSF 88-317*.

Physalis acutifolia (Miers) Sandwith [*P. wrightii* A. Gray]. Sharpleaf Ground-cherry

CP: Reported from Las Playas (Simmons 1966) but no specimen located; it occurs in adjacent Sonora (Felger 2000). **OP**: *Warren* 17 Nov 1979.

Physalis lobata Torrey [*Quincula lobata* (Torrey) Rafinesque]. Hairy Ground-cherry

CP: *RSF 93-101*. **OP**: *McDougall 62*.

Physalis versicolor Rydberg [*P. crassifolia* Bentham var. *versicolor* (Rydberg) Waterfall]. Desert Ground-cherry; *tomatillo del desierto*

CP: *Shreve 5930*. **OP**: *Parker 7731*. **TA**: *Goodding 4902*.

***Solanum americanum** Miller [*S. nodiflorum* Jacquin]. Black Nightshade; *chichiquelite*; cuvi vupui

OP: *Bowers 1329*.

Solanum douglasii Dunal. Douglas Nightshade
OP: *Supernaugh 443.*
Solanum hindsianum Bentham. *Mala mujer, tomatillo espinoso*
OP: *Lechner 28 Jan 1986.*
Solanum xanti A. Gray. Purple Nightshade
OP: *Tinkham 1 Apr 1942.*

STERCULIACEAE, see **MALVACEAE**

TALINACEAE – TALINUM FAMILY
Talinum paniculatum (Jacquin) Gaertner. Pink Baby's-breath, Jewels of Opar
OP: *SR 20061022-14.*

TAMARICACEAE – TAMARISK FAMILY
****Tamarix aphylla** (Linnaeus) H. Karsten. Athel, Saltcedar; *pino salado*
CP: *RSF 02-15.* **OP**: *SR 20 Apr 2001* (ORPI).
***Tamarix chinensis** Loureiro [*T. ramosissima* Ledebour]. Saltcedar, Tamarisk; *pino salado*; 'onk 'u'us
CP: *Simmons 28 Oct 1962* (CAB). **OP**: *Bowers 1391.*

URTICACEAE – NETTLE FAMILY
Parietaria hespera B. D. Hinton var. **hespera**. Desert Pellitory
CP: *RSF 93-90.* **OP**: *RSF 88-298.* **TA**: *RSF 04-55.*

ULMACEAE, see **CANNABACEAE**

VERBENACEAE – VERBENA FAMILY
Aloysia wrightii (A. Gray) A. Heller ex Abrams. *Oreganillo*
CP: *RSF 93-39.* **OP**: *Nichol 16 May 1937.*
Glandularia bipinnatifida (Nuttall) Nuttall var. **bipinnatifida** [*Verbena ciliata* Bentham. *V. bipinnatifida* var. *ciliata* (Bentham) B. L. Turner]
OP: *Tinkham 1 Apr 1942.*
Glandularia gooddingii (Briquet) Solbrig [*Verbena gooddingii* Briquet]. Desert Verbena
CP: *RSF 93-65.* **OP**: *Kearney 10842.*
****Lantana camara** Linnaeus. Lantana; *confiturilla negra*
OP: *SR 24 Mar 2003.*
Tetraclea coulteri A. Gray. Coulter's Wrinklefruit
CP: *RSF 92-741.* **OP**: *SR 24 Nov 1997* (ORPI).
Verbena bracteata Lagasca & Rodriguez. Big-bract Verbena
CP: *RSF 92-555.*
Verbena menthifolia Bentham. Mint Vervain
Attributions of *V. halei* Small to Arizona, New Mexico, and northwestern Mexico are based on misidentifications of *V. menthifolia* (Nesom 2010).
CP: *RSF 92-556.* **OP**: *RSF 88-454.*
Verbena xylopoda (L. M. Perry) G. L. Nesom [*V. neomexicana* (A. Gray) Small var. *xylopoda* L. M. Perry]. Arizona Vervain. See Nesom (2010).
OP: *Kearney 10846.*

VISCACEAE – see **SANTALACEAE**

ZYGOPHYLLACEAE – CALTROP FAMILY
Fagonia, see Felger (2000).
Fagonia californica Bentham subsp. **californica** [*F. laevis* Standley. *F. californica* subsp. *laevis* (Standley) Wiggins]
CP: *RSF 92-53.* **TA**: *RSF 93-195.*

Fagonia californica subsp. **longipes** (Standley) Felger & C. H. Lowe [*F. longipes* Standley]
CP: *RSF 92-572.* **OP**: *McDougall 51.*
Fagonia pachyacantha Rydberg [*F. californica* var. *glutinosa* Pringle ex Vail]
CP: *RSF 93-169.* **TA**: *Lindquist 25 Mar 1983.*
Kallstroemia californica (S. Watson) Vail. *Baiburín, mal de ojo*
CP: *RSF 92-674.* **OP**: *Bowers 1529.* **TA**: *RSF 04-47.*
Kallstroemia grandiflora Torrey ex A. Gray. Summer poppy; *baiburín, mal de ojo*
CP: *RSF 92-686.* **OP**: *Bowers 1528.*
Larrea tridentata (de Candolle) Coville [*L. divaricata* Cavanilles subsp. *tridentata* (de Candolle) Felger & C. H. Lowe]. Creosotebush; *hediondilla, gobernadora*; segai, segoi
CP: *Yeatts 3657.* **OP**: *Nichol 26 Mar 1939.* **TA**: *RSF 04-17.*
***Tribulus terrestris** Linnaeus. Puncture Vine, Caltrop, Goathead; *torito, toboso*
CP: *Simmons 7.*

MONOCOTS--MONOCOYLEDONEAE

AGAVACEAE, see **ASPARAGACEAE**

ALLIACEAE, see **AMARYLLIDACEAE**

AMARYLLIDACEAE – AMARYLLIS FAMILY
Allium macropetalum Rydberg. Desert Onion; *cebollín*
CP: *RSF 93-117.* **OP**: *Phillips 83-87* (ASU, ORPI).
Zephyranthes longifolia Hemsley. Plains Rain-lily
OP: *Bowers 1802.*

ARECACEAE – PALM FAMILY
****Washingtonia filifera** (Linden ex André) H. Wendland ex de Bary. California Fan Palm
OP: *RSF 88-258* (ORPI, removed).

ASPARAGACEAE – ASPARAGUS FAMILY (includes Agavaceae, Nolinaceae or Ruscaceae, and Themidaceae)
Agave × ajoenesis W. C. Hodgson. Ajo Mountain Agave
OP: *Hodgson 4478* (holotype, DES).
Agave deserti Engelmann subsp. **simplex** Gentry. Desert Agave; *lechuguilla, mezcal*; 'a'ud
CP: *Gentry 20590.* **OP**: *Hodgson 5766* (ASU, ORPI). **TA**: *RSF 90-19.*
Agave schottii Engelmann var. **schottii**. Shin-dagger; *amolillo*; utko je:j
OP: *Baker 7758* (ASU).
Dichelostemma capitatum (Bentham) Alfred Wood subsp. **pauciflorum** (Torrey) Keator [*D. pulchellum* (Salisbury) A. Heller var. *pauciflorum* (Torrey) Hoover. *Brodiaea capitata* Bentham var. *pauciflora* Torrey]. Blue Dicks, Wild Hyacinth; *coberia, cobena, ajo blanco*; ha:d
CP: *Crawford 3* (ASC). **OP**: *RSF 05-254.*
Hesperocallis undulata A. Gray. Ajo Lily, Desert Lily; *ajo silvestre*; a:sos
CP: *Reeves 6783* (RSA). **OP**: *McDougall 37.* **TA**: *RSF 05-119.*
Nolina bigelovii (Torrey) S. Watson. Desert Tree-beargrass
CP: *RSF 92-601.* **TA**: *Shreve 6233.*
Nolina microcarpa S. Watson. Beargrass; *sacahuiste*; moho
OP: *Bowers 1296* (ORPI).
Triteleiopsis palmeri (S. Watson) Hoover [*Brodiaea palmeri* S. Watson]. Blue Sand-lily
CP: *RSF 93-384.* **TA**: *TRV 27 Mar 1983.*
Yucca baccata Torrey var. **brevifolia** L. D. Benson [*Y. arizonica* McKelvey]. Banana Yucca; *dátil*; howij
OP: *RSF 05-278.*

COMMELINACEAE – SPIDERWORT FAMILY
Commelina erecta Linnaeus. White-mouth Dayflower
OP: *Wilson 191.*

CYPERACEAE – SEDGE FAMILY
Cyperus esculentus Linnaeus var. **leptostachyus** Boeckeler. Yellow Nutgrass; *coquillo amarillo, cebollín*; vasai su:vĭ
CP: *RSF 01-575.*
Cyperus laevigatus Linnaeus. Flat Sedge
OP: *McDougall 34.*
Cyperus mutisii (Kunth) Andersson [*Mariscus mutisii* Kunth. *C. asper* (Liebmann) O'Neill]
OP: *Goodding 306-41.*
Cyperus squarrosus Linnaeus [*C. aristatus* Rottbøll. *Mariscus squarrosus* (Linnaeus) C. B. Clarke]. Dwarf Sedge
CP: *Monson 9.* **OP**: *Clark 10990* (ORPI). **TA**: *RSF 04-41.*
Eleocharis coloradoensis (Britton) Gilly. Dwarf Spikerush
OP: *Peebles 14565.*
Eleocharis flavescens (Poiret) Urban var. **flavescens**. Yellow Spikerush
OP: *Darrow 2403.*
Eleocharis rostellata (Torrey) Torrey. Traveling Spikerush
OP: *McDougall 35.*
Schoenoplectus americanus (Persoon) Volkart ex Schinz & R. Keller [*Scirpus americanus* Persoon. *S. olneyi* A. Gray]. Bulrush; *tule*; va:k
OP: *Peebles 14564.*

HYDROCHARITACEAE – WATERWEED FAMILY (includes Najadaceae)
Najas marina Linnaeus. Holly-leaf Water-nymph; *sargazo*
OP: *Pinkava 2363* (ASU).

IRIDACEAE – IRIS FAMILY
Sisyrinchium demissum Greene. Blue-eyed Grass
OP: *SR* 23 Apr 1999 (ORPI).

JUNCACEAE – RUSH FAMILY
Juncus bufonius Linnaeus. Toad Rush
OP: *Clark 11501* (ORPI, extirpated).
Juncus cooperi Engelmann. Cooper's Rush
OP: *Bowers 1309.*
Juncus mexicanus Willdenow ex Roemer & Schultes f. [*J. articus* Willdenow var. *mexicanus* (Willdenow ex Roemer & Schultes f.) Balsev]. Mexican Rush, Wire Rush
OP: *Reichhardt 69.*

LILIACEAE – LILY FAMILY
Calochortus kennedyi Porter var. **kennedyi**. Desert Mariposa Lily; *ajo amarillo, cobena amarilla*; ha:dkos
OP: *RSF 05-176.*

NOLINACEAE, see **ASPARAGACEAE**

POACEAE (GRAMINEAE) – GRASS FAMILY
Aristida adscensionis Linnaeus. Six-weeks Three-awn; *zacate tres barbas*
CP: *RSF 92-681.* **OP**: *Bowers 1034.* **TA**: *RSF 04-69.*
Aristida californica Thurber var. **californica**. California Three-awn; *tres barbas de California*
CP: *Reeder 6835.*
Aristida californica var. **glabrata** Vasey. Smooth California Three-awn; *tres barbas de California*
OP: *Reeder 8218.*

Aristida purpurea Nuttall var. **nealleyi** (Vasey) Allred [*A. glauca* (Nees) Walpers]. Purple Three-awn; *tres barbas*

CP: *Reeder 7591*. **OP**: *RSF 90-49*. **TA**: *Vorhies 16 Apr 1924*.

Aristida purpurea var. **parishii** (Hitchcock) Allred [*A. parishii* Hitchcock]. Parish Three-awn

CP: *Reeder 6830*. **OP**: *RSF 92-102*.

Aristida ternipes Cavanilles var. **gentilis** (Henrard) Allred [*A. gentilis* Henrard. *A. hamulosa* Henrard. *A. ternipes* var. *hamulosa* (Henrard) Trent]. Poverty Three-awn; *zacate araña de tres barbas*

CP: *RSF 92-710*. **OP**: *SR 2003-306* (ORPI).

Aristida ternipes var. **ternipes**. Spider Grass; *zacate araña*

CP: *RSF 92-579b*. **OP**: *Bowers 917*.

***Avena fatua** Linnaeus. Wild Oats; *avena silvestre, avena cimarróna, avena loca*; 'agspĭ mudat-kam, ko:ksam

OP: *SR 14 Apr 1998*.

Bothriochloa barbinodis (Lagasca) Herter [*Andropogon barbinodis* Lagasca]. Cane Bluestem; *zacate popotillo*

CP: *Goodding 127*. **OP**: *Bowers 911*. **TA**: Tinajas Altas Canyon, 19 Mar 1998, *RSF*, observation.

Bouteloua aristidoides (Kunth) Grisebach [*B. aristidoides* var. *arizonica* M. E. Jones]. Six-weeks Needle Grama; *aceitilla, navajita aguja*

CP: *RSF 92-667*. **OP**: *RSF 86-280*. **TA**: *RSF 04-31*.

Bouteloua barbata Lagasca var. **barbata**. Six-weeks Grama; *navajita, zacate liebrero*; s-cuk mudadt-kam

CP: *RSF 92-683*. **OP**: *RSF 86-279*. **TA**: *RSF 04-32*.

Bouteloua barbata var. **rothrockii** (Vasey) Gould [*B. rothrockii* Vasey]. Rothrock Grama; *zacate liebrero*

OP: *Bowers 1708*.

Bouteloua curtipendula (Michaux) Torrey. Side-oats Grama; *banderilla*; da:pk vasai

OP: *Nichol 4 May 1939*.

Bouteloua repens (Kunth) Scribner & Merrill [*B. filiformis* (E. Fournier) Griffiths]. Slender Grama; *navajita delgada*

OP: *Van Devender 85-113*.

Bouteloua trifida Thurber. Red Grama; *navajita china*

CP: *RSF 92-648*. **OP**: *SR 20050320-46*.

Bromus carinatus Hooker & Arnott [*B. arizonicus* (Shear) Stebbins. *B. carinatus* var. *arizonicus* Shear. *B. marginatus* Nees ex Steudel]. California Brome

CP: *RSF 92-2*. **OP**: *Bowers 1209*.

***Bromus madritensis** Linnaeus subsp. **rubens** (Linnaeus) Husnot [*B. rubens* Linnaeus]. Red Brome; *bromo rojo*

CP: *RSF 93-324*. **OP**: *SR 12 May 2003*. **TA**: *RSF 02-8*.

****Bromus tectorum** Linnaeus. Cheat Grass, Downy Chess

OP: *RSF 86-133*.

Cenchrus, see Chemisquy et al. (2010) and Columbus and Smith (2010).

***Cenchrus ciliaris** Linnaeus [*Pennisetum ciliare* (Linnaeus) Link]. Buffelgrass; *zacate buffel*

CP: *RSF 92-727*. **OP**: *RSF 86-448*. **TA**: Frontera Canyon, 18 Mar 1998, *RSF*, observation.

***Cenchrus echinatus** Linnaeus. Southern Sandbur; *guachapori*

OP: *RSF 87-319*.

***Cenchrus setaceus** (Forsskål) Morrone [*Pennisetum setaceum* (Forsskål) Chiovenda. *P. ruppelii* Steudel]. Fountain Grass

CP: *RSF 92-646*. **OP**: *RSF 87-333*.

***Cenchrus spinifex** Cavanilles, 1799 [*C. incertus* M. A. Curtis, 1835. *C. pauciflorus* Bentham, 1844]. Common Sandbur; *huizapori, guachapori*

CP: *Reeder 6836*.

Chloris virgata Swartz. Feather Fingergrass; *zacate lagunero*

CP: *RSF 92-550*. **OP**: *RSF 87-315*.

Cottea pappophoroides Kunth. Cotta Grass; *zacate papo*
CP: *RSF 02-38*. **OP**: *RSF 02-73*.

***Cynodon dactylon** (Linnaeus) Persoon var. **dactylon**. Bermuda Grass; *zacate bermuda, zacate ingles*; ki: weco vasai, 'a'ai hihimdam vasai
CP: Eagle Tank, 13 Jun 1992, *RSF*, observation. **OP**: *RSF 87-320*.

***Dactyloctenium aegyptium** (Linnaeus) Willdenow. Crowfoot Grass; *zacate de cuervo*
OP: *RSF 87-289*.

Dasyochloa pulchella (Kunth) Willdenow ex Rydberg [*Triodia pulchella* Kunth. *Tridens pulchellus* (Kunth) Hitchcock. *Erioneuron pulchellum* (Kunth) Tateoka]. Fluff Grass; *zacate borreguero*
CP: *RSF 92-641*. **OP**: *Bowers 921*. **TA**: *RSF 04-11*.

Digitaria californica (Bentham) Henrard var. **californica** [*Trichachne californica* (Bentham) Chase]. Arizona Cottontop; *zacate punta blanca*
CP: *Goodding 924G*. **OP**: *Bowers 923*. **TA**: *RSF 10-185*.

Distichlis spicata (Linnaeus) Greene [*D. stricta* (Torrey) Rydberg]. Salt Grass; *zacate salado*; 'onk, vasai
OP: *Nichol 28 Apr 1939*.

***Echinochloa colona** (Linnaeus) Link. Jungle Rice, Leopard Grass; *zacate pinto, zacate tigre, zacate rayado*
CP: *RSF 92-717*. **OP**: *TRV 9 Sep 1984*.

***Echinochloa crus-galli** (Linnaeus) P. Beauvois. Barnyard Grass; *zacate de agua, zacate de corral*
CP: *RSF 92-718* (ASU).

Elymus elymoides (Rafinesque) Swezey [*Sitanion hystrix* (Nuttall) J. G. Smith]. Bottlebrush Squirreltail
OP: *Bowers 1302*.

***Enneapogon cenchroides** (Lichtenstein ex Roemer & Schultes) C. E. Hubbard. Soft-feather Pappus Grass
OP: *SR 20061022-1*.

Enneapogon desvauxii P. Beauvois. Spike Pappus Grass, Nine-awn Pappus Grass; *zacate lobero*
CP: *Monson 24 May 1957*. **OP**: *SR 20060927-1*.

****Eragrostis barrelieri** Daveau. Mediterranean Love Grass
OP: *RSF 87-276*.

***Eragrostis cilianensis** (Allioni) Vignolo-Lutati ex Janchen. Stink Grass; *zacate apestoso*
Perry and McNeill (1986) confirm that the Allioni is given credit for the basionym and that Janchen is the publishing author, thus supporting the authorship shown here for this species (John Reeder, personal communication 2004 and Kelly Allred, personal communication 23 December 2011).
CP: *RSF 92-567*. **OP**: *Van Devender 84-447*. **TA**: *RSF 04-21*.

Eragrostis intermedia Hitchcock. Plains Love Grass
OP: *Nichol 4 May 1939*.

***Eragrostis lehmanniana** Nees. Lehmann Love Grass
CP: *RSF 92-647*. **OP**: *SR 9 May 1996*.

Eragrostis pectinacea (Michaux) Nees [*E. diffusa* Buckley. *E. tephrosanthes* Schultes. E. *arida* Hitchcock. E. *pectinacea* var. *miserrima* (E. Fournier) Reeder]. Carolina Love Grass
CP: *RSF 01-560*.

***Eriochloa acuminata** (J. Presl) Kunth var. **acuminata** [*E. lemmonii* Vasey & Scribner var. *gracilis* (E. Fournier) Gould]. Southwestern Cup Grass; *zacate taza*
OP: *RSF 86-266*.

Eriochloa aristata Vasey var. **aristata**. Bearded Cup Grass; *zacate taza*
CP: *RSF 92-719*. **OP**: *RSF 02-73a* (ASU).

Festuca microstachys Nuttall [*Vulpia microstachys* (Nuttall) Munro]. Small Fescue. For the two *Festuca*, see Columbus and Smith (2010) and Jepson Flora Project (2012).
OP: *RSF 03-426*.

Festuca octoflora Walter [*Vulpia octoflora* (Walter) Rydberg]. Sixweeks Fescue, Eight-flowered Fescue
CP: *RSF 93-89*. **OP**: *Nichol 14 Mar 1939*. **TA**: *TRV 10 Mar 1980*.

Heteropogon contortus (Linnaeus) P. Beauvois ex Roemer & Schultes [*Andropogon contortus* Linnaeus]. Tanglehead; *zacate colorado*

CP: *RSF 92-651.* **OP**: *Reeder 8911.* **TA**: *TRV 25 Mar 1983.*

Hilaria belangeri (Steudel) Nash [*H. belangeri* var. *longifolia* (Vasey) Hitchcock]. Curly Mesquite; *zacate chino*

OP: *RSF 05-179.*

Hilaria rigida (Thurber) Bentham ex Scribner [*Pleuraphis rigida* Thurber]. Big Galleta; *tobosa*

CP: *RSF 93-405.* **OP**: *TRV 87-8.* **TA**: *RSF 04-46.*

Hopia obtusa (Kunth) Zuloaga & Morrone [*Panicum obtusum* Kunth]. Vine Mesquite; *zacate de guía*

OP: *Bowers 1796.*

***Hordeum murinum** Linnaeus subsp. **glaucum** (Steudel) Tzvelev [H. *stebbinsii* Covas. *H. leporinum* Link subsp. *glaucum* (Steudel) T. A. Booth & A. J. Richards]. Wild Barley; *cebadilla silvestre*

CP: *RSF 93-72.* **OP**: *Nichol 28 Apr 1939.*

Leptochloa dubia (Kunth) Nees [*Diplachne dubia* (Kunth) Scribner]. Green Sprangletop

OP: *Gould 4690.*

Leptochloa fusca (Linnaeus) Kunth subsp. **uninervia** (J. Presl) N. W. Snow [*L. uninervia* (J. Presl) Hitchcock & Chase. *Diplachne uninervia* (J. Presl) Parodi]. Mexican Sprangletop

OP: *SR 2003-442.*

Leptochloa panicea (Retzius) Ohwi subsp. **brachiata** (Steudel) N. W. Snow [*L. brachiata* Steudel. *L. filiformis* (Persoon) P. Beauvois]. Red Sprangletop; *deparramo rojo*

CP: *RSF 92-564.* **OP**: *Bowers 1518.*

Leptochloa viscida (Scribner) Beal. Sticky Sprangletop

CP: *Monson 7.*

Melica frutescens Scribner. Woody Melic

OP: *Goodding 302-41.*

Muhlenbergia alopecuroides (Grisebach) P. M. Peterson & Columbus [*Lycurus alopecuroides* Grisebach. *L. setosus* (Nuttall) C. Reeder]. Bristly Wolftail. For placement of *Lycurus* in *Muhlenbergia*, see Peterson et al. (2010).

OP: *Wirt 29 Oct 1989* (ORPI).

Muhlenbergia appressa C. O. Goodding. Devil's Canyon Muhly

OP: *SR 2003-339.*

Muhlenbergia dumosa Scribner ex Vasey. Bamboo Muhly; *carricillo, otatillo*

OP: *Reeder 8909.*

Muhlenbergia emersleyi Vasey [*M. gooddingii* Soderstrom]. Bullgrass, Bull Muhly; *zacate de toro*

OP: *Goodding M-373.*

Muhlenbergia fragilis Swallen. Delicate Muhly

OP: *SR 20061022-2.*

Muhlenbergia microsperma (de Candolle) Kunth. Little-seed Muhly; *liendrilla*

CP: *RSF 92-569.* **OP**: *Goodding 480-45.* **TA**: *RSF 04-51.*

Muhlenbergia porteri Scribner ex Beal. Bush Muhly; *zacate aparejo*; ku:kpadag

CP: *RSF 93-45. RSF.* **OP**: *Mulroy 6 Oct 1969.*

Muhlenbergia rigens (Bentham) Hitchcock. Deer Grass; *zacate del venado*

OP: *Goodding 479-45.*

Muhlenbergia tenuifolia (Kunth) Kunth [*M. monticola* Buckley]. Slender Muhly

OP: *Reeder 8910.*

Panicum alatum Zuloaga & Morrone var. **alatum**

CP: *RSF 01-555.*

***Panicum antidotale** Retzius. Giant Panic Grass, Blue Panic Grass; *panizo azul*

OP: *RSF 87-329.*

Panicum hallii Vasey var. **hallii** [*P. lepidulum* Hitchcock & Chase]. Hall's Witch Grass

OP: *Goodding 312-41.*

Panicum hirticaule J. Presl var. **hirticaule** [*P. capillare* Linnaeus var. *hirticaule* (J. Presl) Gould]. Mexican Panic Grass

CP: *RSF 92-657.* **OP**: *RSF 88-428.*

Pappophorum vaginatum Buckley. Pappus Grass
OP: *Albee Apr 1937.*
***Phalaris caroliniana** Walter. Carolina Canary Grass; *alpistillo*
CP: *Harlan 494.*
***Phalaris minor** Retzius. Little-seed Canary Grass; *alpistillo*; ba:bkam
CP: *RSF 92-569.* **OP**: *Bowers 1722.*
Phragmites australis (Cavanilles) Trinius ex Steudel subsp. **berlandieri** (E. Fournier) Saltonstall & Hauber [*P. communis* Trinius]. Common Reed, Reed Grass; *carrizo*; va:pk
OP: *RSF 86-214.*
****Poa annua** Linnaeus. Annual Blue Grass, Winter Grass; *pastito de invierno*
OP: *Darrow 2405.*
Poa bigelovii Vasey & Scribner. Bigelow Blue Grass; *zacate azul anual*
CP: *RSF 93-54.* **OP**: *Bowers 1250.*
***Polypogon monspeliensis** (Linnaeus) Desfontaines. Rabbitfoot Grass, Annual Beard Grass; *zacate cola de zorra*
CP: *Henry 05/08/1996* (CAB). **OP**: *McDougall 91.*
***Polypogon viridis** (Gouan) Breistroffer [*Agrostis semiverticillata* (Forsskål) C. Christensen. *Polypogon semiverticillata* (Forsskål) Hylander]. Water Bent Grass, Water Beard Grass
OP: *Bowers 1311.*
***Schismus arabicus** Nees [*S. barbatus* subsp. *arabicus* (Nees) Marie & Weiller]. Arabian Grass
CP: *RSF 93-35.* **OP**: *Bowers 1109.* **TA**: *TRV 5 Mar 1983.*
***Schismus barbatus** (Linnaeus) Thellung. Mediterranean Grass
OP: *RSF 88-301.*
Setaria grisebachii E. Fournier. Grisebach's Bristle Grass; *zacate cola de zorra*
OP: *Goodding 474-45.*
Setaria liebmannii E. Fournier. Liebmann's Bristle Grass; *zacate cola de zorra*
OP: *Goodding 25 Sep 1943.*
Setaria macrostachya Kunth (this species complex includes **S. leucopila** (Scribner & Merrill) K. Schumann). Plains Bristle Grass; *zacate tempranero*
CP: *RSF 92-570.* **OP**: *Bowers 1294.*
***Sorghum halepense** (Linnaeus) Persoon. Johnson Grass; *zacate johnson*
CP: *Simmons 30 Oct 1962* (CAB). **OP**: *RSF 87-325.*
Sporobolus airoides (Torrey) Torrey. Alkali Sacaton; *zacatón alcalino*
CP: *RSF 92-604.* **OP**: *Bowers 1805.*
Sporobolus cryptandrus (Torrey) A. Gray. Sand Dropseed; *zacate arenero*
CP: *RSF 92-643d.* **OP**: *RSF 90-474.* **TA**: *Goodding 599.*
Sporobolus flexuosus (Thurber ex Vasey) Rydberg [*S. cryptandrus* var. *flexuosus* (Thurber ex Vasey) Thurber]. Mesa Dropseed
OP: *Wirt 8 Sep 1990.*
Sporobolus pyramidatus (Lamarck) Hitchcock [*S. patens* Swallen. S. *pulvinatus* Swallen]. Whorled Dropseed
OP: *RSF 88-420.*
Stipa speciosa Trinius & Ruprecht var. **speciosa** [*Achnatherum speciosum* (Trinius & Ruprecht) Barkworth. *Jarava speciosa* (Trinius & Ruprecht) Peñailillo]. Desert Needle Grass. See Columbus and Smith (2010) and Jepson Flora Project (2012).
OP: *RSF 90-529.* **TA**: *TRV 26 Mar 1983.*
Trichloris crinita (Lagasca) Parodi [*T. mendocina* (Philippe) Kurtz. *Chloris crinita* Lagasca]. Feather Finger Grass; *zacate escoba*
OP: *RSF 87-280.*
Tridens eragrostoides (Vasey & Scribner) Nash. Lovegrass Tridens
OP: *Goodding 295-41.*
Tridens muticus (Torrey) Nash var. **muticus**. Slim Tridens
CP: *Whipple 3955.* **OP**: *Bowers 1559.* **TA**: *RSF 04-75.*
****Triticum aestivum** Linnaeus. Wheat; *trigo*; pilkañ
OP: *RSF 05-161.*

Urochloa arizonica (Scribner & Merrill) Morrone & Zuloaga [*Panicum arizonicum* Scribner & Merrill. *Brachiaria arizonica* (Scribner & Merrill) S. T. Blake]. Arizona Signal Grass; *piojillo de arizona*

CP: *Bowers 1532*. **OP**: *Bowers 1519*.

POTAMOGETONACEAE – PONDWEED FAMILY

Stuckenia pectinata (Linnaeus) Börner [*Potamogeton pectinatus* Linnaeus. *Coleogeton pectinatus* (Linnaeus) Les & R. R. Haynes]. Sago Pondweed

OP: *RSF 86-270*.

RUPPIACEAE – DITCH-GRASS FAMILY

Ruppia cirrhosa (Petagna) Grande. Ditch-grass

OP: *RSF 86-222*.

RUSCACEAE, see **ASPARAGACEAE**

THEMIDACEAE, see **ASPARAGACEAE**

TYPHACEAE – CATTAIL FAMILY

Typha domingensis Persoon. Southern Cattail; *tule*; 'uduvhag

CP: Cabeza Prieta Tanks, 12 Jun 1992, *RSF*, observation (also see Simmons 1966). **OP**: *RSF 89-235*. **TA**: *Wilder 08-383*.

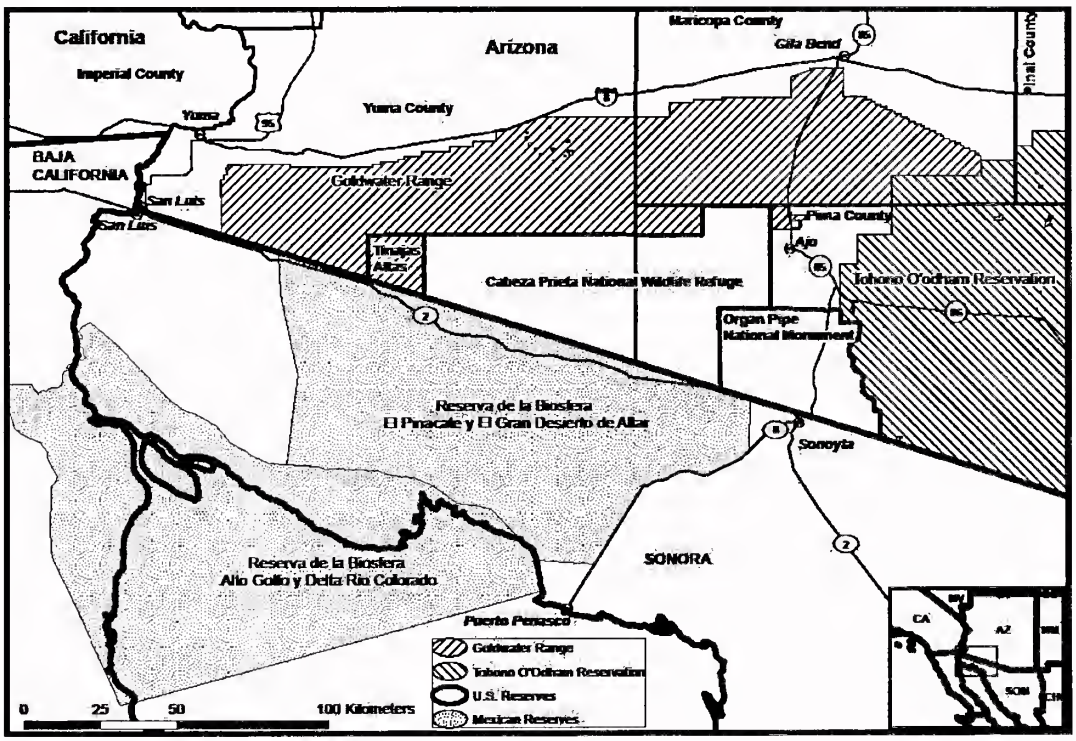
ZANNICHELLIACEAE – HORNED-PONDWEED FAMILY

Zannichellia palustris Linnaeus. Horned-pondweed

CP: *Harlan 471*. **OP**: *Peebles 14566*.

Table 1. Numbers of total taxa, non-native species, genera, families, and areas for Organ Pipe Cactus National Monument, Cabeza Prieta National Wildlife Refuge, Tinajas Altas Region, and the six protected areas of the total Dry Borders area. Taxa numbers represent species plus subspecies or varieties, and hybrids.

	OP, CP, TA combined	Organ Pipe (OP)	Cabeza Prieta (CP)	Tinajas Altas (TA)	Six Dry Borders Areas
Taxa	732	655	423	228	862
Non-native species	78	72	37	12	91
Genera	420	395	266	164	448
Families	94	93	63	47	107
Acres	1,270,699	330,689	860,010	80,000	7,515,221
Hectares	514,234	133,825	348,034	32,375	3,041,302



Checklist of Plants of Southwestern Arizona. Figure 1. Organ Pipe Cactus National Monument, Cabeza Prieta National Wildlife Refuge, Tinajas Altas Region (the flora area), and adjacent areas. Drafted by H. Jeff Boyd.

Checklist of Plants of Southwestern Arizona. Figure 2. Cabeza Prieta National Wildlife Refuge. Photographer David Taylor, looking northward above O'Neill's Grave, 26 Mar 2010. Xeroriparian vegetation along small arroyos including *Hilaria rigida, Parkinsonia florida*, and *Prosopis glandulosa*. Photo by RSF.

Checklist of Plants of Southwestern Arizona. Figure 3. Cabeza Prieta National Wildlife Refuge. Pinta Sands, 27 Mar 2010. Spring annuals including *Abronia villosa*, *Brassica tournefortii* in foreground, *Cryptantha angustifolia*, and *Oenothera deltoides*. Photo by Joan Scott.

Checklist of Plants of Southwestern Arizona. Figure 4. Organ Pipe Cactus National Monument. Southeast-facing slope in the southern Diablo Mountains with saguaros (*Carnegiea gigantea*) and organ pipes (*Stenocereus thurberi*). 12 Apr 2006. Photo by SR.

Checklist of Plants of Southwestern Arizona. Figure 5. Organ Pipe Cactus National Monument. Quitobaquito pond including *Baccharis salicifolia* in foreground, and *Populus fremontii, Schoenoplectus americanus, Typha domingensis* in background. 29 Sep 2011. Photo by SMB.

Checklist of Plants of Southwestern Arizona. Figure 6. Tinajas Altas Mountains. Desert bighorn ram and including *Bursera microphylla* and *Hyptis albida*. 16 Apr 2011. Photo by Jim Malusa.

Checklist of Plants of Southwestern Arizona. Figure 7. Tinajas Altas Mountains, Surveyors Tank Canyon, looking eastward. Canyon bottom vegetation including *Encelia farinosa*, *Olneya tesota*, *Prosopis glandulosa*, and *Senegalia greggii*. 29 Mar 2010. Photo by RSF.

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